E/1997/50
ST/ESA/256

WORLD ECONOMIC AND SOCIAL SURVEY 1997

TRENDS AND POLICIES IN THE WORLD ECONOMY

UNITED NATIONS • NEW YORK 1997

Note
Symbols of United Nations documents are composed of capital letters combined with figures.

E/1997/50
ST/ESA/256

United Nations publications • Sales number E.97.II.C.1

Manufactured in the United States of America

PREFACE

Nearly 50 years ago, the United Nations Secretariat in Lake Success, New York, issued its first global economic report. Thus began a series that continues today with this edition of the **WORLD ECONOMIC AND SOCIAL SURVEY.**

The primary purpose of the Survey *has remained the same: "to meet the need, which has been recognized by the General Assembly and the Economic and Social Council, for an appraisal of world economic conditions and trends to be made from time to time as a prerequisite for recommendations as to concerted national or international action in the economic field". However, since that time, the world economy has grown more complex and the scope of the* Survey *has broadened correspondingly.*

At the time of its introduction, the Survey *was the only publication that provided an overview of global economic developments. There are now several publications that fulfil this role from different perspectives, but the* Survey *has continued to make a constructive contribution by helping to broaden the debate and to introduce essential social and political dimensions into discussions that might otherwise have been dominated by narrowly economic and financial considerations.*

The **World Economic and Social Survey, 1997** *continues in this tradition. In addition to its overview of current and emerging economic trends, it examines the process of fiscal consolidation around the world. Whereas most analyses of this subject have been undertaken from a purely economic point of view, the* Survey *seeks to underline the role of political considerations in successful fiscal reform.*

The first Economic Report of the United Nations *contained material prepared by the Food and Agriculture Organization of the United Nations and the International Labour Organization*

"illustrat(ing) the effective coordination existing among the staffs of the United Nations and the secretariats of the specialized agencies". The present edition contains a chapter prepared in close collaboration with the World Health Organization, that reflects not only the continuation of cooperation with the specialized agencies, but also the Survey's *evolution to reflect the broad nature of the development debate today.*

This Survey, *like its predecessors over the years, also continues to draw upon the cooperation of the regional commissions of the United Nations and the United Nations Conference on Trade and Development, as well as upon that of the International Monetary Fund and the World Bank. In addition, several individual government officials were generous with their time and assistance in preparation of some of the case materials contained in the present* Survey. *We are grateful for the broad cooperation that the staff have enjoyed.*

This edition of the Survey *is dedicated to the memory of Göran Ohlin, former Assistant Secretary-General of the United Nations, who, from 1985 to 1992, provided intellectual leadership to the team that produced the report.*

KOFI A. ANNAN
Secretary-General

CONTENTS

Chapter Page

PART TWO. A PERSPECTIVE ON FISCAL ADJUSTMENT

EXPLANATORY NOTES

The following symbols have been used in the tables throughout the report:

.. **Two dots** indicate that data are not available or are not separately reported.

– **A dash** indicates that the amount is nil or negligible.

- **A hyphen (-)** indicates that the item is not applicable.

- **A minus sign (-)** indicates a deficit or decrease, except as indicated.

. **A full stop (.)** is used to indicate decimals.

/ **A slash (/)** between years indicates a crop year or financial year, for example, 1990/91.

- **Use of a hyphen (-)** between years, for example, 1990-1991, signifies the full period involved, including the beginning and end years.

Reference to "tons" indicates metric tons and to "dollars" ($) United States dollars, unless otherwise stated.

Annual rates of growth or change, unless otherwise stated, refer to annual compound rates.

In most cases, the growth rate forecasts for 1997 are rounded to the nearest quarter of a percentage point.

Details and percentages in tables do not necessarily add to totals, because of rounding.

The following abbreviations have been used:

ACP	African, Caribbean and Pacific (Group of) States
ACPC	Association of Coffee Producer Countries
CEETEs	Central and Eastern European transition economies
CFA	Communauté financière africaine
CIS	Commonwealth of Independent States
COMTRADE	Commodity Trade Statistics Database of the United Nations Statistics Division
DAC	Development Assistance Committee (of OECD)
EAP	Enhanced Access Policy (of the International Monetary Fund)
EBRD	European Bank for Reconstruction and Development
EC	European Community
ECE	Economic Commission for Europe
ECLAC	Economic Commission for Latin America and the Caribbean
EMS	European Monetary System
EMU	Economic and Monetary Union
ERM	Exchange Rate Mechanism of the EMS
ESAF	Enhanced Structural Adjustment Facility (of the International Monetary Fund)
EU	European Union
Eurostat	Statistical Office of the European Communities
FAO	Food and Agriculture Organization of the United Nations
f.o.b.	free on board
GCC	Gulf Cooperation Council
GDP	gross domestic product
GNP	gross national product
HIPC	heavily indebted poor countries
HIV/AIDS	human immunodeficiency virus/acquired immunodeficiency syndrome
ICP	International Comparison Programme
IDA	International Development Association
IFAD	International Fund for Agricultural Development
ILO	International Labour Organization
IMF	International Monetary Fund
INTRASTAT	system of data collection for intra-EU trade
IPCC	Intergovernmental Panel on Climate Change
LIBOR	London Interbank Offered Rate
MERCOSUR	Southern Cone Common Market
NAIRU	non-accelerating inflation rate of unemployment
NATO	North Atlantic Treaty Organization
NGLs	natural gas liquids
ODA	official development assistance
OECD	Organisation for Economic Cooperation and Development
OPEC	Organization of the Petroleum Exporting Countries
ppmv	parts per million by volume
ppp	purchasing power parity
Project LINK	International Research Group of Econometric Model Builders, with headquarters at the United Nations Secretariat
SAF	Structural Adjustment Facility
SDRs	special drawing rights (IMF)
SFF	Supplementary Financing Facility (of the IMF)
SITC	Standard International Trade Classification
SNA	System of National Accounts
SOE	State-owned enterprise
STF	Systemic Transformation Facility
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNHCR	Office of the United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
VAT	value-added tax
WTO	World Trade Organization

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the United Nations Secretariat concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

The term "country" as used in the text of this report also refers, as appropriate, to territories or areas.

For analytical purposes, the following country classification has been used: [a]

Developed economies (developed market economies):

Europe, excluding the European transition economies, Canada and the United States of America, Japan, Australia and New Zealand.

Major developed economies (the Group of Seven):

Canada, France, Germany, Italy, Japan, United Kingdom of Great Britain and Northern Ireland, United States of America.

European Union:

Austria, Belgium, Denmark, Finland, France, Germany,Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, United Kingdom of Great Britain and Northern Ireland.

Economies in transition:

Central and Eastern European transition economies (CEETEs, sometimes contracted to "Eastern Europe"):

Albania, Bulgaria, Czech Republic, Hungary, Poland, Romania, Slovakia and successor States of the Socialist Federal Republic of Yugoslavia, namely, Bosnia and Herzegovina, Croatia, Slovenia, the former Yugoslav Republic of Macedonia, Yugoslavia.

Baltic States:

Estonia, Latvia and Lithuania.

Commonwealth of Independent States (CIS):

Armenia, Azerbaijan, Belarus, Georgia, Kazakstan, Kyrgyzstan, Republic of Moldova, Russian Federation, Tajikistan, Turkmenistan, Ukraine, Uzbekistan.

Developing economies:

Africa

Asia and the Pacific (excluding Japan, Australia, New Zealand and the member states of CIS in Asia)

Latin America and the Caribbean.

Sub-groupings of Asia and the Pacific:

Western Asia plus Islamic Republic of Iran (commonly contracted to "Western Asia":

Bahrain, Cyprus, Iran (Islamic Republic of), Iraq, Israel, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syrian Arab Republic, Turkey, United Arab Emirates, Yemen.

China

Eastern and Southern Asia:

All other developing economies in Asia and the Pacific.

Sub-grouping of Africa:

Sub-Saharan Africa, excluding, Nigeria and South Africa (commonly contracted to "sub-Saharan Africa"):

All of Africa except Algeria, Egypt, Libyan Arab Jamahiriya, Morocco, Nigeria, South Africa, Tunisia.

For particular analyses, developing countries have been subdivided into the following groups:

Net-creditor countries:

Brunei Darussalam, Kuwait, Libyan Arab Jamahiriya, Oman, Qatar, Saudi Arabia, Singapore, Taiwan Province of China, United Arab Emirates.

Net-debtor countries:

All other developing countries.

Fuel-exporting countries:

Algeria, Angola, Bahrain, Bolivia, Brunei Darussalam, Cameroon, Colombia, Congo, Ecuador, Egypt, Gabon, Indonesia, Iran (Islamic Republic of), Iraq, Kuwait, Libyan Arab Jamahiriya, Mexico, Nigeria, Oman, Qatar, Saudi Arabia, Syrian Arab Republic, Trinidad and Tobago, United Arab Emirates, Venezuela, Viet Nam.

Fuel-importing countries:

All other developing countries.

Least developed countries:

Afghanistan, Angola, Bangladesh, Benin, Bhutan, Burkina Faso, Burundi, Cambodia, Cape Verde, Central African Republic, Chad, Comoros, Djibouti, Equatorial Guinea, Eritrea, Ethiopia, Gambia, Guinea, Guinea-Bissau, Haiti, Kiribati, Lao People's Democratic Republic, Lesotho, Liberia, Madagascar, Malawi, Maldives, Mali, Mauritania, Mozambique, Myanmar, Nepal, Niger, Rwanda, Samoa, Sao Tome and Principe, Sierra Leone, Solomon Islands, Somalia, Sudan, Togo, Tuvalu, Uganda, United Republic of Tanzania, Vanuatu, Yemen, Zaire, Zambia.

The designation of country groups in the text and the tables are intended solely for statistical or analytical convenience and do not necessarily express a judgement about the stage reached by a particular country or area in the development process.

[a] Names and composition of geographical areas follow those of "Standard country or area codes for statistical use" (ST/ESA/STAT/SER.M.49/Rev.3), with one exception, namely, Western Asia which in the *Survey* includes the Islamic Republic of Iran (owing to the large role of the petroleum sector in its economy) and excludes the transition economies of the region. Also, "Eastern Europe", as used in this *Survey*, is a contraction of "Central and Eastern Europe"; thus the composition of the region designated by the term differs from that of the strictly geographical grouping.

I THE WORLD ECONOMY IN 1997

Following the development disappointments of the 1980s, the economic upheavals associated with the political transformations in several countries at the turn of the decade and the recession in the developed market economies in the early 1990s, the world economy is experiencing widespread economic growth as it moves towards the close of the millennium. Many countries have built a foundation of more sustainable national policies and the international economic environment is more propitious. Barring unpredictable shocks, the present level and pattern of growth are likely to be maintained and in some cases improved in 1997. The momentum is encouraging; but it is not spread widely enough.

The economic and social setbacks brought about by the previous disruptions are far from overcome in some parts of the developing world and in the economies that are in transition from planned to market systems. Unemployment is an immediate concern in the transition economies and in many parts of the developing world. It is also a highly salient issue even in the richest countries of the world. Moreover, most of the long-standing development challenges persist. In particular, the difference in well-being between the world's most fortunate citizens and its least fortunate ones remains unacceptably large and the number of people living in absolute poverty is intolerably high.

In order to address these problems, the high rates of economic growth that some developing countries have achieved must be extended to the slower-growing developing economies, as well as to the economies in transition. In addition, developed countries must not sacrifice economic growth and jobs to achieve their other policy goals with undue speed. Economic growth, by itself, does not solve all economic and social problems and is not to be promoted above all other goals of policy. Nevertheless, the global aspiration for sustainable economic and social development requires solid rates of economic expansion as part of the enabling environment.

GLOBAL TRENDS AND CHALLENGES

The world economy grew 3 per cent in 1996 and it is forecast to grow at the same rate in 1997 (see table I.1). This will make the third year in the most recent four in which world output growth has reached that level.[1] After a disappointing start to the decade, the world economy is on a growth trend that exceeds that of the 1980s. It also appears to be a sustainable growth trend in

1 Data for the growth of output in the present *Survey* are not readily compared with those of previous *Surveys* because the base year for aggregation has been shifted from 1988 to 1993. For comparative purposes, table I.1 includes an alternative measure of the growth of world output which is employed, in particular, by the International Monetary Fund in its *World Economic Outlook*. This measure uses an alternative methodology for weighting countries in the aggregates (see introduction to the statistical annex).

Table I.1.
GROWTH OF WORLD OUTPUT[a], 1981-1997

(Annual percentage change)

	1981-1990	1991	1992	1993	1994	1995	1996[b]	1997[c]
World	2.8	0.8	1.8	1.3	3.0	2.4	3.0	3
Developed economies	2.9	0.8	1.6	0.7	2.6	1.9	2.4	2 1/2
Economies in transition[d]	1.7	-9.2	-13.6	-9.1	-4.4	-1.4	-0.9	2
Developing economies	2.4	3.3	5.2	5.2	5.5	4.6	5.7	6
Memorandum items:								
Number of countries with rising per capita output	106	72	76	64	99	107	122	127
Number of countries in sample	127	127	141	142	142	142	142	142
World output growth with PPP-based weights[e]	3.1	1.1	2.2	2.4	3.7	3.4	3.8	4 1/4

Source: United Nations.
a Calculated as a weighted average of individual country growth rates of gross domestic product (GDP), where weights are based on GDP in 1993 prices and exchange rates.
b Preliminary estimates.
c Forecast, based in part on Project LINK.
d Based on reported GDP, which seriously underestimates activity in several countries.
e Employs an alternative scheme for weighting national growth rates of GDP, based on purchasing power parity (PPP) conversions of national currency GDP into international dollars (see introduction to statistical annex).

that inflation rates have fallen in most countries and are being further reduced in others, while excessive fiscal deficits have been broadly curtailed.

The world's economies in 1996 and 1997

Among the developed economies, some countries are combining moderate growth of output with low inflation and are seeking to extend their economic expansions over unprecedented lengths without a cyclical break. Others are at earlier stages of cyclical expansion, but none is in outright recession. Most developed economies, however, have not generated adequate job growth and unemployment rates, remaining excessive, represent a waste of human resources and a drain on fiscal budgets.

This is especially the case in Western Europe, where unemployment remained high: it even worsened in France and Germany when economic growth faltered in 1996. The overriding policy objective for many countries in Western Europe has been to achieve the fiscal targets required to obtain membership in the Economic and Monetary Union (EMU) of the European Union. While reduction of fiscal deficits in Europe to more sustainable levels and creation of EMU are expected to yield important benefits over the longer run, the effort to reach these targets by the end of 1997 has reduced economic growth in the preceding period. In 1997 itself, this may be offset to some extent by less restrictive mone-

tary policies and by exchange-rate movements among the major currencies: the relative strength of the dollar (and also the British pound) against the deutsche mark and the currencies that closely track it should have a favourable effect on the tradable goods sectors of the continental European countries.

In several of the developed countries, there is a significant structural unemployment problem. The longer unemployment lasts, the more it fosters a social isolation that makes reintegration into the employed labour force more difficult. Short-term increases in economic growth, per se, will not solve this problem, but sustained higher rates of economic growth will encourage greater investment rates that, coupled with structural reform policies, can bolster the demand for labour.

Most transition economies have begun their economic recovery, although only Poland has reached a level of output that matches that of the pre-transition years. One important disappointment in 1996 was that the expected beginning of recorded economic growth in the Russian Federation failed to materialize, owing to unanticipated uncertainties that now seem to be past. Output there is forecast to begin increasing this year.[2] Resumption of sustained growth is an essential step in the transition process: much of the structural transformation of production will be embodied in investment and, even with the implementation of institutional changes that are prerequisites of growth, growing output and incomes are necessary to encourage enterprises to undertake that investment.

[2] Measured output appears to capture a diminishing share of economic activity in many of the transition economies, including the Russian Federation, and thus measured economic growth is believed to underestimate actual behaviour (see introduction to the statistical annex for additional details).

Table I.2.
NUMBER OF DEVELOPING COUNTRIES WITH GDP PER CAPITA GROWTH OF 3 PER CENT OR MORE, 1990-1996

		1990		1991		1992		1993		1994		1995		1996[a]	
	Number of countries monitored	N	P	N	P	N	P	N	P	N	P	N	P	N	P
Developing countries of which:	95	24	41	26	44	32	45	28	49	34	72	31	69	35	74
Latin America	24	3	24	6	16	9	20	9	27	9	56	5	17	7	33
Africa	38	4	17	6	8	7	11	4	12	8	11	6	9	11	25
Eastern and Southern Asia (including China)	18	9	47	11	59	12	58	13	62	14	93	15	93	14	95
Western Asia	15	8	77	3	8	4	32	2	29	3	3	5	33	3	35
Least developed countries	40	2	23	5	7	9	23	8	46	11	42	11	44	11	54

Source: United Nations,including population estimates and projections from *World Population Prospects: The 1996 Revision* (United Nations publication, forthcoming).

Note: N: Number of countries that achieved the specified per capita growth; P: Percentage of total population of monitored countries in a given group accounted for by countries in this group that achieved the specified per capita growth.

[a] Preliminary estimates.

The rate of growth of the developing countries as a group is at its highest in many years. This acceleration is due more to a broadening of the numbers of growing countries than to faster rates of growth in a limited number of countries. Of the 95 developing countries that are monitored for the preparation of the *Survey*, only 11[3] failed to increase per capita output in 1996, compared with 24 in 1995. A larger number of the same group of countries achieved growth of per capita output of 3 per cent or more in 1996 (see table I.2). Moreover, this group of more rapidly growing countries accounted for about 70 per cent of the population of the developing countries; in the early years of the decade, well under half the population of the developing world lived in countries growing at this rate.

The broadening of the reach of economic growth in developing countries to include an increasing number of the lower-income countries represents a heartening contrast to the situation in the 1980s. However, many least developed countries have still not achieved these higher rates of growth and, particularly for the poorer countries, even the current rate of progress is insufficient. As pointed out in a previous Survey[4], low-income countries need to maintain higher rates of growth if they are to achieve even moderate levels of income per capita within a reasonable time. In the current environment, the objective should be for the low-income countries to achieve as a long-term average, with the support of their development cooperation partners, at least the 3 per cent per annum increase in income per head that many developing countries achieved in 1996.

Although Asian economies have achieved such growth rates for many years, for Africa and Latin America and the Caribbean a 3 per cent average annual rate of growth per capita would represent a new departure. In Africa, output per capita fell on average in the 1980s and has fallen thus far in the 1990s; in Latin America, it fell in the 1980s and grew by only 1.5 per cent a year in 1991-1996 (see table A.1).

Thus, the stronger growth of output and incomes in Africa in 1996, which is expected to continue in 1997, if at a slightly reduced rate, is a dramatic change from the past (see table A.4). More than half of Africa's population is less than 20 years of age and growth in the region in 1996 was the highest in their lifetime. The improvement in economic growth can be attributed in part to several temporary factors, including improved weather, the lingering effects of relatively high commodity prices at mid-decade, and substantially higher petroleum prices in 1996. However, other factors promise to have more long-lasting effects, including spreading macroeconomic stability and structural reforms.

This notwithstanding, the region remains the one most dependent on official international assistance, which promises to be available in increasingly stringent amounts, and it has the least access to private international investment and credit. Investors are discouraged by the continuing heavy debt burdens of many African countries. In this regard, the new international initiative to reduce the debt of a number of heavily indebted poor countries holds out the promise of removing this constraint on development for the countries that can access the new arrangements (see below).

In the case of Latin America, the most encouraging aspect of economic performance in 1996 was the speed with which the region recovered from the Mexican financial crisis of 1995. Besides the recovery of domestic economic activity, there has been a resumption of international capital flows, its rapidity

[3] Burundi, Central African Republic, Costa Rica, Ecuador, Jamaica, Libyan Arab Jamahiriya, Namibia, Paraguay, Venezuela, Yemen and Zaire.

[4] See *World Economic Survey, 1993* (United Nations publication, Sales No. E.93.II.C.1), box I.1.

being in marked contrast to the time taken by lenders to re-enter the market after the debt crises of the 1980s. This international confidence augurs well for the region's short-term growth prospects, although both individual countries and the region as a whole remain vulnerable to a sudden reversal of these flows, as was last the case for some countries in 1994 when interest rates in the United States of America rose unexpectedly.

At the same time, some of the other consequences of the recessions in Argentina and Mexico in 1995 persist; in particular, little progress has been made in reducing the unemployment produced by the recession and accentuated by the natural increase in the labour force. However, the problem is not restricted to these two countries: even those countries in the region that did not suffer such a setback in 1995 are facing major difficulties with unemployment.

The international environment and policy

There are increasing signs that some of the stylized facts about global linkages are becoming less definitive. As was pointed out in the 1996 *World Economic and Social Survey*,[5] growth in the developing countries is now less closely tied to that of the developed countries. In 1996, the acceleration in the growth of world output occurred despite a slowdown in world trade from its exceptional growth in 1994 and 1995: world export volume grew only 4.6 per cent in 1996, after growth rates of 10 per cent in 1994 and 1995. Looking ahead, the volume of world trade is expected to increase in 1997 by almost 8 per cent and provide one of the stimuli for a further increase in global production. This latter increase, however, is expected to be modest.

The combination of faster growth of output with a slower growth of world trade in 1996 underlines the fact that several other dimensions of the international economic environment, as well as national policies, were broadly favourable in 1996. International interest rates tended to be modestly lower and international capital flows remained buoyant. There continued to be a sizeable net transfer of financial resources to developing countries — $37 billion to the net-debtor developing countries as a group in 1996 — albeit still concentrated in relatively few countries.

The dynamic elements of international flows to developing countries are all private and these have been especially concentrated. Indeed, 10 countries accounted for over three-quarters of the private flows in 1996. Nevertheless, direct investment and capital market flows continue to spread among developing economies, as domestic economic situations increasingly stabilize and legal and institutional reforms begin to take hold. A key concern, however, is the curtailed supplies of official flows, particularly official development assistance (ODA), for support of those countries and for those activities that are not typically the focus of private investment.

ODA fell to 0.27 per cent of the GDP of the developed donor countries in 1995 and preliminary indications are that ODA fell in 1996, with no signs of a reversal in 1997. While this decline will not affect all developing countries equally, it seems inevitable that it will result in some fall-off in concessional flows to low-income countries, from either bilateral or multilateral sources or from both.

This is most disquieting at a time when there is an unparalleled opportunity for the productive use of such resources by the world's poorest countries. Many

5 United Nations publication, Sales No. E.96.II.C.1 and Corr.1.

of the necessary elements are now in place for making a concerted attack on poverty and underdevelopment. A majority of the low-income countries at present have democratically elected Governments and most of them have set in motion the strategies, policies and practices that are generally perceived as being conducive to economic growth, including an opening of their economies to the pressures of global markets. In this arena, however, they face an increasingly competitive environment, for which many of them are inadequately equipped in terms of human and physical capital. Private sources are unlikely to provide either the volume or the type of resources required to meet these needs. Lacking such resources, there is a risk that these countries will become further marginalized in world society, presenting the international community of the next generation with an even greater, if possibly somewhat different, challenge.

With regard to one important component of official flows, in 1996 agreement was reached on a means of addressing the debt overhang of low-income countries. The Heavily Indebted Poor Countries (HIPC) Debt Initiative of the World Bank and the International Monetary Fund may go a long way towards removing this impediment to development in many of the poorest countries. It is noteworthy that, by the time official creditors devised this means of resolving the debt problems of those countries, middle-income countries with debt crises in the 1980s had already largely settled their debt difficulties and private creditors had reopened lending to many of them. The effort to help the poorest countries put their debt difficulties behind them needs to be fully implemented as rapidly as possible. It is incumbent on all those involved to proceed with the new initiative speedily and flexibly in order to ensure that economic growth in these countries is not hindered further.

A PERSPECTIVE ON MACROECONOMIC POLICY

One economic objective of Governments worldwide during the 1990s has been to reduce fiscal deficits. This has been motivated in part by the recognition that deficits in many cases already were, or were becoming, unsustainably large, with deleterious effects on economic performance currently and in the future. However, the period has also been typified by a more general desire to reduce the economic and social role of government.

Part two of the *World Economic and Social Survey, 1997* reviews some of these fiscal consolidation experiences, focusing on the processes that have been followed in implementation. One overriding conclusion is that, probably to a greater extent than in any other area of economic management, the implementation of fiscal policy is dominated by political, rather than technical, considerations. This reinforces the case for a country-by-country approach and militates against the application of predetermined rules or targets. Similarly, there can be no universally agreed definition of the appropriate economic and social role of the State: such a definition is embedded in the political, economic and social heritage of each country. The country experiences examined in part two of the *Survey* illustrate the ways in which these factors have affected various efforts to redefine the role of the State in the 1990s.

In many countries, fiscal consolidation has been an element of broader programmes of stabilization and structural adjustment. Effectively situating fiscal consolidation within more comprehensive adjustment programmes appears to

have been one criterion for their success.

Anti-inflationary policies have often been a central part of the policy package. They appear to have succeeded in reducing the rate of price increases to historic lows in many cases. Triple-digit rates of annual inflation in developing countries have become an exception, with several developing countries having succeeded in attaining annual inflation rates comparable with those that used to characterize the developed countries. (The developed countries themselves have forced their own inflation rates even lower.) Although the rate of inflation in many of the economies in transition remains higher than elsewhere, these countries, with a few notable exceptions, are making steady progress in reducing the rapid price increases that accompanied the decontrol of their economies.

The widespread progress towards macroeconomic stability has been accompanied, as promised, by higher growth in many countries. However, unemployment has reached, and remains at, historically high levels in many countries. This suggests that progress towards macroeconomic stability has not yet been matched by comparable success in achieving the structural adjustments necessary to absorb the labour that has been shed in undertaking some of the reforms.

The present unemployment in the economies in transition has arisen directly as a result of the effort to restructure their economies. In the western part of Europe, a large part of the unemployment problem is also recognized as being structural. In most other parts of the world, unemployment remains a long-standing problem but one that has been exacerbated in recent years. It has now become acute in many developing countries and is giving rise to social unrest in a number of cases. Unless the problem is successfully addressed, it is likely to threaten the political stability that is a prerequisite of economic growth.

Having achieved a remarkable degree of success in controlling inflation, Governments need to turn their attention to examining these issues and to devising policies that address the human and social objective of reducing unemployment. In developing countries, the challenge continues to lie in creating employment at a faster rate than that of the increase in the labour force, if the unemployed and underemployed are to be absorbed. While the rate of population growth has slowed in most developing countries in recent years (see table A.1), the present growth of the labour force reflects the faster population growth rate of a decade or two ago. A growth rate of output per capita of 3 per cent annually is a benchmark that would meet this challenge.

SELECTED ANALYTICAL TOPICS IN THE 1997 SURVEY

Besides reviewing the current global economic situation, the *World Economic and Social Survey* seeks to foster international discussion of economic and social issues with a significant policy dimension. In addition to the review of fiscal adjustment in part two of the present *Survey*, there is a review in part three of selected issues that have been the subject of international attention elsewhere.

In 1995, the *Survey*[6] concluded that some of the expectations of a "peace dividend" resulting from the end of the cold war had proved to be unrealistic. On this occasion, chapter IX of the 1997 *Survey* examines another supposed benefit of the end of the cold war, namely the decline in the international arms trade. Here again, it is found that the improvement, in terms of reduced threats to international security because of reduced arms sales, may be less than the

6 United Nations publication, Sales No. E.95.II.C.1, chap. XIII.

simple data suggest. While government-to-government arms sales have fallen considerably, economic forces have given rise to the existence of new actors in the arms trade and new arrangements for arms transfers. These have been accompanied by a proliferation of civilian products that also have military uses. Although much has changed, the arms trade continues to pose a threat to international peace and security.

Continuing the series of analyses of some of the more dynamic areas of international trade in earlier *Surveys*,[7] part three of this *Survey* includes an examination of the growth of international travel as an element of trade in services. International travel has been both a foundation of, and an opportunity offered by, globalization. As such, it has expanded rapidly over the past two decades and assumed a larger share of both global output and world trade. Its recent growth has been greatest in the developing countries, albeit from a small base. As indicated in chapter X, it continues to offer great opportunities but countries wishing to avail themselves of these need to take a number of actions in order to do so.

Part three also draws attention to two current international development challenges -- one relatively short-term and calling for action at the national level, and the other of a longer-term character and calling for an international response. Chapter VIII examines the resurgence of tuberculosis which now accounts for about 4-5 per cent of deaths worldwide. Tuberculosis is highly infectious and is spreading rapidly in Africa and Asia, as well as in some of the former economies in transition. The disease has high economic as well as social costs since the overwhelming number of victims are in the most economically active period of their lives (between ages 15 and 49). The present epidemic is partially a result of human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS) but, unlike that disease, tuberculosis can be controlled with existing drugs at relatively low cost. However, this requires government intervention and sustained (but comparatively modest) government funding. This is one example of changed circumstances calling for flexibility in government expenditure policy. Governments around the world must recognize the magnitude of the threat and allocate the resources, human as well as financial, necessary to tackle it.

Whereas the solution to the tuberculosis problem is clear, there is controversy about the answer to the longer-term problem of carbon dioxide (CO_2) emissions. It is generally agreed that present patterns of energy consumption and CO_2 emissions are not sustainable over the longer term, but there is less agreement about the magnitude of the problem and possible solutions to it. As a contribution to this discussion, chapter XI uses a number of hypothetical scenarios to explore the possible evolution of energy consumption and CO_2 emissions. The analysis suggests that present policies to limit CO_2 emissions in the developed countries will be insufficient to bring about the necessary global reduction if the developing countries double their present one-third share of global energy consumption (and therefore of CO_2 emissions) by the year 2050. There is thus a need to develop, in line with the United Nations Framework Convention on Climate Change, global approaches to complement the regional strategies for dealing with CO_2 emissions.

7 See *World Economic and Social Survey, 1995* (United Nations publication, Sales No. E.95.II.C.1), chap. XI; and *World Economic and Social Survey, 1996* (United Nations publication, Sales No. E.96.II.C.1 and Corr.1), chap. XII.

PART ONE

STATE OF THE WORLD ECONOMY

II THE CURRENT SITUATION IN THE WORLD'S ECONOMIES

There was a strengthening and a spreading of economic growth in much of the world in 1996. Equally importantly, the conditions appear to be in place for this situation to continue in 1997.

The solid performance of many developing countries in 1996 is particularly encouraging and has two noteworthy characteristics. First, Africa achieved its highest rate of economic growth for about two decades. More importantly, this improvement in Africa covered almost the whole of the continent: at least seven out of every eight Africans lived in countries with rising per capita output in 1996. This is unprecedented in recent memory. Much of Africa has seen incomes per capita fall so far that a continuation of these new developments could be the most hopeful sign in a long time.

Second, in 1996 both Mexico and Argentina were able to quickly resume growth after the sharp setback in 1995 and growth for the Latin American region as a whole rose accordingly. The recession in these two countries in 1995 had been sparked by the behaviour of international capital markets and there were fears of more far-reaching and long-term consequences.

Asia remains the fastest-growing region of the world. There was a continuation of the recent convergence in growth rates among its subregions in 1996. West Asia was able to capitalize on the higher oil prices in 1996, while various constraints tempered the very high rates of growth in China and South-East Asia.

The economies in transition registered a further decline in output in 1996, but the fall was the smallest since the transition began. There was positive, albeit slower, growth in Central and Eastern Europe, but this was outweighed by yet another decline in output in the Commonwealth of Independent States (CIS). While signs of macroeconomic instability remain in a number of these countries, most of the economies in transition registered further progress in reducing inflation and this is expected to be reflected in positive growth for the group as a whole in 1997.

The acceleration in Japan was largely responsible for the small increase in the growth of the developed economies, but the 1997 outlook for Japan is weaker than that of 1996. The economy of the United States of America, while growing slowly in 1996, expanded more rapidly than the Western European economies. In 1997,

there is expected to be some acceleration in Europe, as well as in the United States.

With respect to policy stances, reducing inflation has been a primary economic objective throughout the world and considerable success has been achieved on this front. Related to this, there have been widespread efforts to reduce fiscal deficits. Such policies have improved the macroeconomic underpinning of national economies. Nevertheless, in many countries, medium-term growth prospects remain uncertain and recent growth has not been accompanied by sufficient increases in employment.

THE DEVELOPED ECONOMIES

In 1996, the developed economies grew by 2.4 per cent, a figure representing somewhat faster growth than in 1995; growth in 1997 is expected to show a further modest increase (see table A.2). Growth is accelerating in North America and Western Europe, while in Japan and Australia economic activity is expected to be slower in 1997 as a whole than in 1996.

This moderate growth at a time of favourable monetary conditions is partly due to simultaneous multi-year efforts to cut budget deficits. In 1997, fiscal policy is expected to stay tight in most developed countries. At least in the short term, this acts as a brake on demand. More generally, Governments and central banks are giving high priority to achieving and maintaining a stable macroeconomic environment and thus are not likely to allow growth of aggregate demand to deviate significantly from what they consider to be a relatively steady non-inflationary pace. This dampens real growth in the recovery phase but could lead to more durable and stable expansion over the longer run.

The growth momentum is being supported by previous and continuing reductions in short-term interest rates (see table A.8). Longer-term interest rates have fallen as well, with growing confidence that inflation will not be reignited. In many countries, however, long-term rates still seem high, especially in the light of reduced-inflation expectations.

The strengthening of the dollar against most major currencies since April 1995 has provided an additional stimulus to economic growth in several developed economies. Especially in Europe, a prolonged period of inventory correction is likely to be coming to an end, leading to increased output demand. After significant swings over the past two years, inventories are expected to track final demand more closely, thereby exerting a neutral or slightly positive influence on growth.

There has been considerable success achieving the objectives of low inflation (see table A.7). The average rate of inflation in the current expansion has been at its lowest since the 1960s. Consumer price increases in 1997 are likely to remain at an average somewhat above 2 per cent.

After multi-year fiscal consolidation efforts, coupled with a monetary policy aimed at pre-empting a rise in inflation, most countries have created a stable macroeconomic environment that should be the basis for long-term sustainable growth. Yet this strategy has not yet brought about a significant decline in unemployment overall, although there have been important employment gains in some countries (see table A.6). In the United States, the unemployment rate

Table II.1.
MAJOR INDUSTRIALIZED COUNTRIES:QUARTERLY INDICATORS, 1995-1996

	1995 quarter				1996 quarter			
	I	II	III	IV	I	II	III	IV
	Growth of gross domestic product (GDP)[a] (percentage change in seasonally adjusted data from preceding quarter)							
Canada	1.1	-0.8	2.1	0.8	1.4	1.4	3.3	2.9
France	2.8	0.4	0.4	-1.6	4.9	-0.4	3.3	0.8
Germany	1.1	3.2	-0.1	-1.2	-0.4	6.1	3.0	0.3
Italy	5.7	0.5	2.6	1.2	0.8	-1.5	2.2	-0.9
Japan	-0.1	4.0	1.2	5.5	8.4	-1.1	1.3	3.9
United Kingdom	1.5	1.9	2.3	2.3	1.5	2.3	2.8	3.3
United States	0.4	0.7	3.8	0.3	2.0	4.7	2.1	3.8
Total	1.0	1.8	2.2	1.5	3.5	2.4	2.2	2.9
	Unemployment rate[b] (percentage of total labour force)							
Canada	9.6	9.5	9.4	9.4	9.5	9.6	9.7	9.9
France	11.7	11.5	11.5	11.9	12.1	12.2	12.4	12.4
Germany	8.1	8.1	8.2	8.5	8.9	8.9	9.0	9.2
Italy	12.2	11.9	11.9	11.9	12.0	12.0	12.0	11.9
Japan	2.9	3.1	3.2	3.3	3.3	3.5	3.3	3.3
United Kingdom	8.7	8.8	8.8	8.6	8.4	8.3	8.3	7.8
United States	5.5	5.6	5.6	5.5	5.6	5.4	5.3	5.3
Total	6.7	6.7	6.8	6.8	6.9	6.8	6.8	6.8
	Growth of consumer prices[c] (percentage change from preceding quarter)							
Canada	4.4	2.9	1.1	0.0	1.8	2.9	0.7	2.5
France	2.2	1.8	1.4	2.2	2.9	3.2	-1.1	1.8
Germany	3.2	2.1	1.7	0.0	2.5	2.1	1.4	-0.3
Italy	7.0	6.9	4.2	4.4	4.0	5.0	0.9	2.1
Japan	-1.8	0.8	-0.8	-0.4	-1.1	3.0	-0.8	1.1
United Kingdom	3.5	7.4	1.0	0.7	2.0	5.5	0.7	2.3
United States	3.5	3.5	1.7	2.1	3.5	4.1	2.0	3.0
Total	2.3	3.0	1.2	1.3	2.1	3.7	0.8	2.0

Source: Source: United Nations, based on data of International Monetary Fund (IMF), Organisation for Economic Cooperation and Development (OECD) and national authorities.
a Expressed at annual rate (total is weighted average with weights being annual GDP valued at 1993 prices and exchange rates).
b Seasonally adjusted data as standardized by OECD.
c Expressed at annual rate.

dropped to close to its post-war low. Unemployment has also fallen in the United Kingdom of Great Britain and Northern Ireland to below its average in the 1980s. In the rest of Western Europe, unemployment remains very high by historical standards and may continue to worsen in some countries, notably France, Germany and Italy. Japanese unemployment also remains very high by historical standards.

Reducing unemployment is a high political objective in most of these countries. However, as will be discussed below, it is realized that for them to obtain the full benefits from a stable macroeconomic environment in the form of job-creating growth and to compete more effectively in the increasingly globalized world economy, many structural issues must be addressed — in labour and product markets, in education and training, in research and development, in the financing of social services and in the provision of infrastructure.

The year 1997 is of especial importance in that progress of the European countries towards achieving the fiscal criteria established by the Maastricht Treaty on European Union of 1992 (see box V.2) will help determine how the European Union goes ahead with one of the most important economic initiatives of the post-war period, the creation of a single European currency in January 1999. They must determine, in particular, which countries will be in the first wave of entrants.

Economic growth in the major developed economies

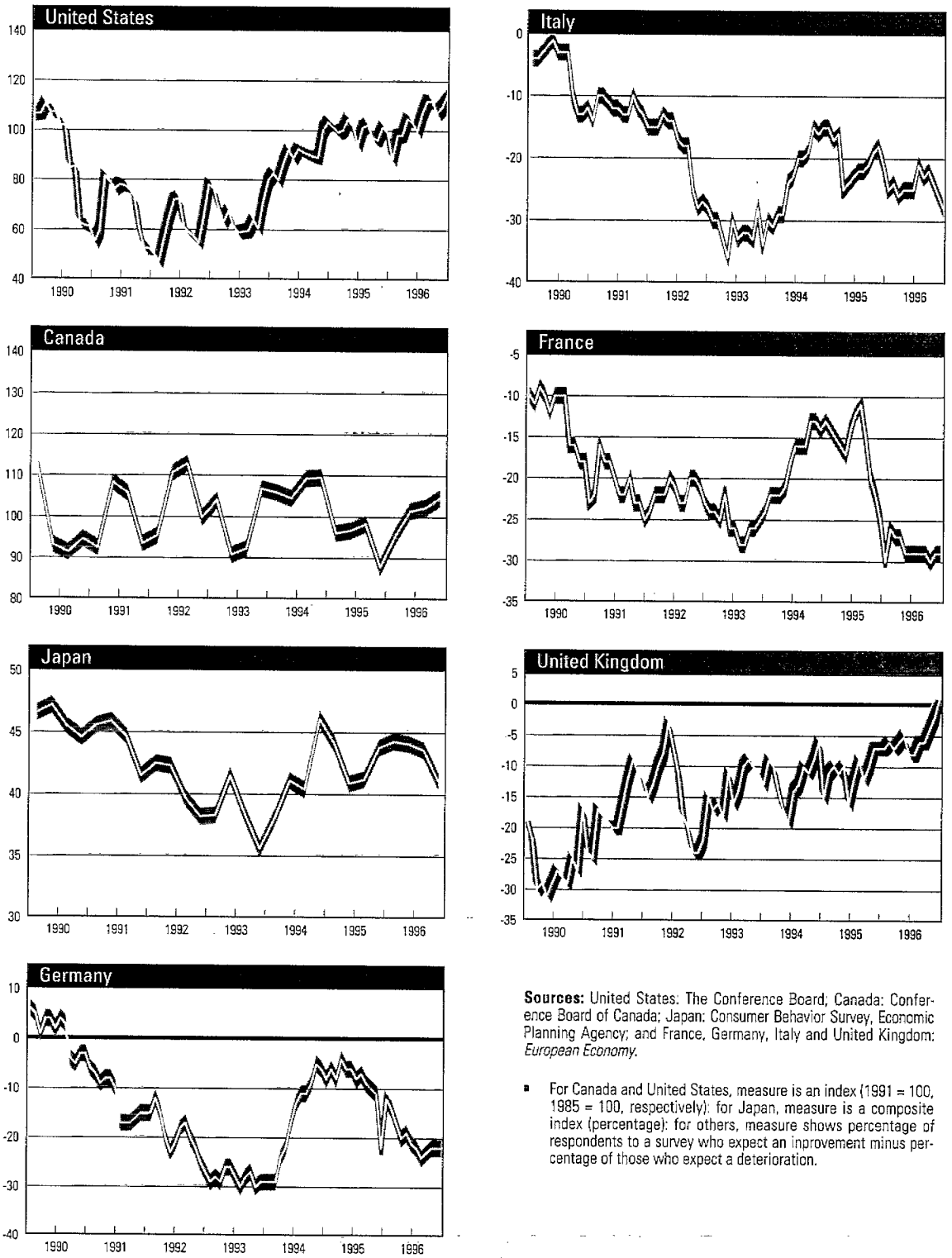
After six years of expansion, the economy of the United States remains robust. The unemployment rate dropped to 5.3 per cent at the end of 1996 from a peak of 7.3 per cent in 1992 (see table II.1). As of April 1997, the unemployment rate had slipped below 5 per cent. This low rate of unemployment has been accompanied by an annual rate of inflation that is expected to stay at around 3 per cent. This combination of low unemployment and subdued inflation, the notable characteristic of the current recovery, has evolved only for the second time in the post-war era and is raising questions about whether there has been a structural change in the relationship of inflation and unemployment (in other words, whether there has been a fall in the "non-accelerating-inflation rate of unemployment" (NAIRU)).[1]

Starting from the fourth quarter of 1996, business investment in the United States, the principal engine of its recovery in the earlier years, has been slowing and moving from an almost exclusive focus on equipment to a more balanced pattern that includes spending on structures. This implies a greater focus on long-term capacity expansion. Consumer spending has been gaining momentum, propelled by the combination of strong labour markets, faster — though still moderate — wage growth, and rising household wealth. High stock prices and improved house prices have contributed to the last-mentioned. Consumer confidence in the United States rose during 1996 (see figure II.1) and strengthened further in early 1997. The outlook for exports is likely to improve as growth picks up in the rest of the developed world and in Latin America.

The Canadian economy seems to be heading into a period of growth of above 3.0 per cent. A decline in both short- and long-term interest rates since early 1995 was made possible by low inflation (averaging 1.3 per cent annually over the past 3 years) and progress in fiscal consolidation. Lower interest rates have

1 See *Economic Report of the President*, 1997 (Washington, D.C., U.S. Government Printing Office, 1997), pp. 45-50.

Figure II.1.
CONSUMER CONFIDENCE IN SEVEN MAJOR ECONOMIES[a], 1990-1996



Sources: United States: The Conference Board; Canada: Conference Board of Canada; Japan: Consumer Behavior Survey, Economic Planning Agency; and France, Germany, Italy and United Kingdom: *European Economy*.

a For Canada and United States, measure is an index (1991 = 100, 1985 = 100, respectively); for Japan, measure is a composite index (percentage); for others, measure shows percentage of respondents to a survey who expect an improvement minus percentage of those who expect a deterioration.

begun boosting domestic demand; final sales have been strong since late 1995, with growth in private consumption reflecting a rise in consumer confidence (see figure II.1). The weakest component of demand will remain government spending, owing to continued fiscal austerity at all levels of government. Because of further cutbacks in public sector employment, joblessness, which is almost twice as high as in the United States, is not expected to decrease substantially (see table A.6). There remains considerable slack in labour and product markets owing to the relatively sluggish recovery from the 1990-1991 recession.

The Japanese economy grew robustly in 1996 for the first time since 1991. A huge public spending programme, which began in 1992, boosted spending, while government fixed investment and private housing investment registered an almost double-digit increase last year. Business fixed investment grew 6.5 per cent in 1996, encouraged by the improved export outlook following the depreciation of the yen in 1996, as well as deregulation measures in some service sectors. Consumer spending has lagged overall gross domestic product (GDP) growth, however, reflecting concerns about the still-weak labour market. Also, net exports were weak, this being a lagged effect of the yen's appreciation in 1995.

There are concerns about the sustainability of Japan's growth in 1997 and beyond. More than 80 per cent of the growth in 1996 resulted from the jump in GDP in the first quarter, reflecting the massive government spending programme; during the rest of the year, when public investment slowed considerably, the economy grew at a more modest rate (see table II.1). Moreover, a sharp decrease in public investment is envisaged in the Government's public spending plans as outlined in the 1997-1998 budget. This budget aims to shrink the general government deficit to below 3 per cent. The major question, therefore, is whether private expenditure will replace the smaller public spending.

In fact, private consumption growth in Japan is forecast to slow down in the second quarter of 1997. The consumption tax rate was raised in April and special income tax exemptions were terminated. On the other hand, private investment and the external sector will likely sustain relatively strong growth as long as the yen-dollar exchange rate remains close to its range in the first quarter of 1997.

The net effect of these various factors is an expansion of output of less than 2 per cent in 1997. This is not sufficient to improve the labour market, especially in the face of structural factors. One of these has been a rise in labour mismatch: that is to say, an increase in the number of labour-market participants who do not possess the skills companies are looking for.

The continental Western European economies appear to have entered a recovery phase again after a severe weakening of activity in the second half of 1995 and early 1996 (see table II.1). The stimuli coming from less stringent monetary policy and strong external demand are likely to outweigh the negative effects of tight fiscal policies. Nevertheless, output is not expected to grow strongly enough to make any significant dent in the high levels of unemployment.

Thus far, the German recovery has been export-led. Business investment, which had played a key role in previous recoveries, fell in 1996 and was concentrated mainly on rationalization and replacement rather than capacity expansion. In 1997, business investment in machinery and equipment, as well as in structures, is expected to remain weak as capacity utilization rates will not reach normal levels before 1998. Private consumption may post only mod-

est gains, reflecting near-zero growth in incomes and a high degree of uncertainty over job security. Overall, projected growth will be too weak to reduce unemployment which is likely to remain near a post-war high in 1997-1998. Since reunification, large public expenditures and improved productivity boosted output in the eastern part of the country and raised the economic growth of Germany as a whole. These regional stimuli are declining in importance, and growth in the eastern part of the country has been converging towards the lower rate of the western part.

After the 1995 slowdown, French economic activity strengthened in the course of 1996 and some further acceleration seems likely in 1997. Exports and investment are expected to be the main engines of growth. There is a need to modernize and restore productive capacities following the sharp decline in investment that occurred in the early 1990s. Consumer spending is likely to lag behind overall GDP owing to the still-depressed level of consumer confidence, and wage moderation in the context of high unemployment, as well as increased tax and social insurance contributions.

The 1996 economic slowdown hit Italy especially hard. With tight monetary policy aimed at fighting inflation, which was considerably above the European Union average, the lira appreciated in 1996. On top of the contractionary effect of these monetary and exchange-rate factors, the Government took an exceptionally austere fiscal stance, designed to ensure that Italy would meet the Maastricht target for the budget deficit. The bright spot, and indeed the objective of the Government's tight policies, has been falling inflation which, for the first time since 1969, sank well below 3.0 per cent at an annual rate by the end of 1996. In the light of the improved inflation outlook, market interest rates have fallen. However, restrained consumer demand, because of the continued weakness in the labour market and the tight fiscal stance, is expected to continue to dampen the recovery in 1997.

The economy of the United Kingdom has entered the sixth year of a cyclical upswing. The expansion is no longer being propelled by exports, owing to sterling's appreciation and the relatively low growth in most other European markets. Rather, there has been a strong rebound in consumer spending supported by further falls in unemployment, rising real incomes and a modest reduction in taxation. Business investment is expected to accelerate in 1997 despite a rise in interest rates, as profit prospects are considered encouraging.

Macroeconomic policy stances

Fiscal discipline, short-term economic fluctuations notwithstanding, characterizes the policy stance in developed countries. Except in Japan, attempts have not been made to spur economic growth through fiscal policy; hence, efforts to navigate economies towards sustainable, non-inflationary growth have become mainly a function of monetary policy.

In the United States, the Federal Reserve has been successful in steering the economy along a path of stable, non-inflationary growth. From July 1995 through January 1996, when it judged that the economy was decelerating too quickly, it lowered its key short-term interest rate, the federal funds rate, 0.75 percentage points in steps to 5.25 per cent. The low-inflation environment allowed the Federal Reserve the virtually unprecedented option of relaxing

monetary policy during a period in which a recession was neither present nor foreseen. On 25 March 1997, the Federal Reserve decided to raise this rate to 5.5 per cent, as the economy had been growing at a very strong pace in the preceding six months. The move was clearly pre-emptive, as there were very few signs of pressure on prices.

The Canadian economy has entered the fourth year of a fiscal austerity that has been more severe than the much-discussed fiscal consolidation in Europe (see table A.8).[2] This deficit reduction has been achieved mainly through spending cutbacks. Canada's debt-to-GDP ratio is expected to start falling in 1998 for the first time since the mid-1970s. The improved inflation outlook in Canada allowed the Bank of Canada to reduce its bank rate 19 times in 21 months to 3.25 per cent by the end of December 1996, taking the country's interest rates to 40-year lows. The increase in United States interest rates in March 1997 widened the already large gap between United States and Canadian interest rates, and put downward pressure on the Canadian dollar. In these circumstances, it is difficult to foresee any further fall in Canadian interest rates.

[2] As a share of GDP, the federal government deficit declined from almost 6.0 per cent in fiscal 1993/94 to 2.4 per cent in 1996/97 and is projected to dip below 1.0 per cent in 1997/98; simultaneously, fiscal contraction has been implemented at the provincial level.

In Japan, the Government perceives an urgent need to reduce fiscal deficits because of the sharp increase in the public debt. As discussed in chapter VI, the future obligations of the Government to finance social security payments are mounting and, unless changes are made, Japan will be faced with severe imbalances in its public finances. The Government is discussing eliminating the need for deficit-financing bonds by the year 2003 and, at the same time, preventing the ratio of taxes to GDP from rising to 50 per cent, which it would have to do in the absence of major changes in expenditure policy. One possible step would be to extend the duration of the 10-year public investment plan. The Government might also impose a cap on, or even reduce, total expenditures. It intends to prioritize all the major expenditure items according to policy goals and cost-effectiveness. This would be an important departure from the traditional budgeting practice of changing expenditure on all items proportionately.

Given the present economic slack, the official discount rate in Japan is likely to remain at the historically low level of 0.5 per cent for some time. Low interest rates are crucial for the economy's recovery. They not only stimulate private investment, but also encourage private investors to buy foreign securities. This should help to counter upward pressures on the yen when the Japanese current account surplus starts increasing again.

Much of the bleak performance of the Japanese economy in recent years has been due to structural weaknesses, some of which were dramatically revealed by the bursting of the speculative financial bubble at the start of the decade. Others pertain to many detailed economic regulations, some of which have outlived their usefulness. The Government's ability to push forward deregulation of industries, such as banking, insurance and telecommunications is crucial for long-term economic growth. Also, given the fact that Japanese banks hold bad debts that total more than 5 per cent of GDP, the Government has sought to ease the burden through the direct purchase of real estate and the creation of securitization schemes for loans backed by real estate.

In many European countries, economic policy making has been dominated by the attempt to meet the budgetary criteria under the Maastricht Treaty while not undermining the recovery. Indeed, if growth falters, it will be close to impossible for many countries to reach the targets by the end of 1997. In some

cases, the budgetary criteria are likely to be met with a less tight fiscal policy than a year ago. In Italy, however, additional spending cuts and new taxes, equivalent to almost 4 per cent of GDP, were imposed in the 1997 regular and supplementary budgets.

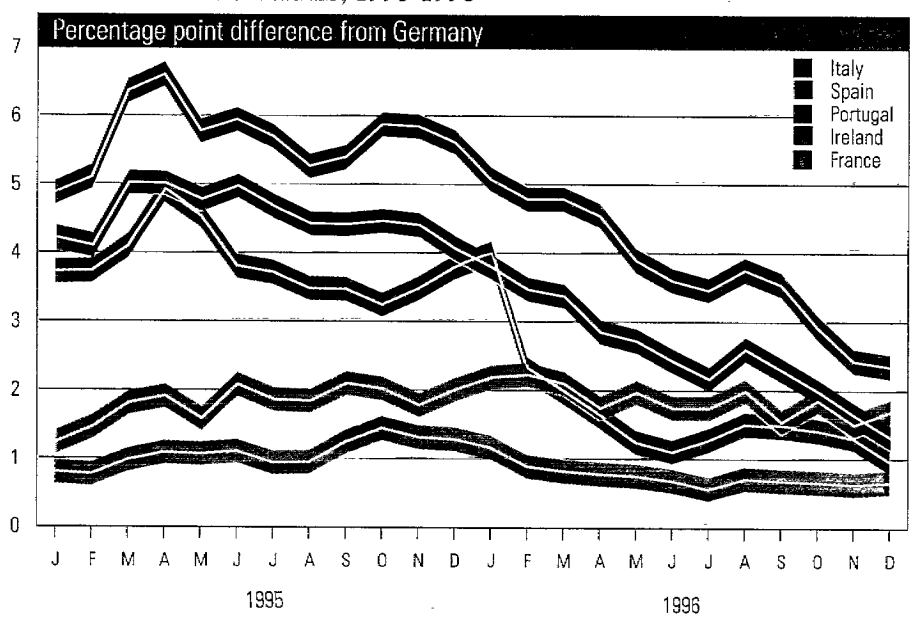
While the fiscal stance remains tight in Europe, monetary conditions have been eased considerably over 1995 and 1996, amid slow growth and falling inflation — itself partly the consequence of fiscal austerity. The lower interest rates that resulted will help reduce debt-service costs and hence assist in the push to reach the Maastricht targets. With strengthening economic activity in 1997, however, the chances of further cuts in these low rates of interest appear to be small.

While central banks and finance ministries largely determine very short run interest rates, movements in long-term interest rates are more market-determined and reflect the market's estimation of the direction of key variables, such as future inflation and exchange-rate movements. In the context of the approach leading to Economic and Monetary Union, there has been a marked convergence in long-term interest rates across countries (see figure II.2).[3] Since 1995, there has been a narrowing of the difference from German rates in the cases of Italy, Portugal and Spain. The yield differential between French and German bonds was eliminated in 1997.

In the United Kingdom, the monetary authorities decided to begin raising rates pre-emptively in order to moderate the economic upswing and prevent inflation from moving above its target rate of 2.5 per cent. On 30 October 1996, the Bank of England raised the base lending rate by a quarter point to 6.0 per cent, in the first tightening of monetary policy in 20 months. Thus far in the present six-year recovery (the first recovery of its kind in the post-war period), GDP has grown at a moderate, but steady, sustainable and non-inflationary rate. Given a moderately

3 Figures for the countries whose currencies track the deutsche mark - Austria, Belgium, Denmark, Luxembourg and the Netherlands -- are not given, as policy ensures that they remain close to German rates.

Figure II.2.
LONG-TERM INTEREST RATES IN SELECTED EUROPEAN COUNTRIES, 1995-1996



Source: IMF, *International Financial Statistics.*

tight budget for the 1997 fiscal year, as well as sterling's considerable strengthening, the current round of monetary tightening is not likely to be stringent.

In Australia, the major focus of macroeconomic policy is to balance the budget in three years. However, in response to a pronounced slowdown in growth, declining inflation pressures and still-high unemployment rates, the Government has relaxed monetary policy by lowering the official cash rate in three steps from 7.5 to 6.0 per cent since July 1996.

In New Zealand, in contrast, both monetary policy and fiscal policy remained tight in 1996, in spite of the fact that they had already slowed the strong growth of 1993-1994. Even though the fiscal stance may become slightly more expansionary in 1997, the budget will remain in surplus.

Structural reforms to reinforce the gains from fiscal consolidation

In the developed countries, the rewards of fiscal consolidation have been seen in the form of lower interest and inflation rates. For the longer term, much will depend on whether countries can build on their fiscal achievements to attain faster, job-creating growth. It is increasingly realized that structural factors must be tackled to ensure that such growth takes place.[4]

The attention being paid by Japan to deregulation offers an example of a structural difficulty being tackled. In Europe, now that their exertions to meet the Maastricht criteria are reaching fruition, countries are increasingly turning to structural policy concerns, chiefly social security, health, education, including the training of labour, and rigidities in the labour and product markets. For instance, in Spain, business leaders and labour leaders reached a national agreement in April 1997 whereby the former accepted a new system of four-year renewable employment contracts for first-time job-seekers and for the long-term unemployed, while the latter agreed to lower compensation in cases of unfair dismissal. These new measures were expected to increase employment opportunities. In Germany, the political process is engaged in tax and welfare reform. A Belgian scheme to reduce the social security contributions of companies who employed manual workers was approved by the European Commission in March 1997. The lower social security contributions for employers were expected to encourage them to make job offers to manual workers and thus to cut unemployment.

[4] See, for instance, the European Council recommendation of 8 July 1996 on the broad guidelines of the economic policies of the member States and the Community: "If the economic challenges facing the Community are to be met, there will need to be a continuation of the current macroeconomic policy strategy, especially in the area of budgetary consolidation, as well as a sustained structural reform. Appropriate initiatives in both the goods and services markets and in the area of labour-market reform are needed" (European Commission, *European Economy* (Brussels), No. 62 (1996), p. 5.).

THE TRANSITION ECONOMIES

The year 1996 saw a further contraction of output in the transition economies as a group (see table A.3). However, 1997 could be a more promising year. This might appear paradoxical in view of the setbacks and difficulties that many encountered in 1996. Yet, there have been important policy developments in several countries in 1996 and early 1997 that offer the promise that, at the end of the year, these economies will be more firmly positioned, with the development of more effective market institutions, to move to a growth path that is sustainable in the longer run.

Overall, it is expected that 1997 might see the first increase in output in the region as a whole since 1989, with the Central and Eastern European transition economies (CEETEs), the Baltic States and the countries of CIS all registering growth (see table A.3). Yet this output revival must be seen in the con-

text of the earlier drastic declines in output: with respect to the CEETEs, only in Poland is output in 1997 expected to surpass its level in 1989[5] (see figure II.3). The measured declines in output have been even more severe in CIS and the Baltic States; for example, 1997 output in the Russian Federation and that in Ukraine are expected to still be more than 40 per cent and 60 per cent respectively below their levels of 1989.

Moreover, the resumption of output growth need not be the same thing as the reduction in unemployment. The total number of registered unemployed in the transition economies was 14.4 million at the end of 1996, 370,000 more than a year before.[6] While the unemployment level in the CEETEs and the Baltic States declined from 7.5 million in March 1994 to 6.1 million in December 1996, the unemployment rates in these countries are still high, averaging about 11 per cent. In CIS, the rate of unemployment is lower, averaging 6.4 per cent, with the recorded rates varying between about 1 per cent in Azerbaijan and nearly 10 per cent in Armenia.[7]

Given the scale of the measured output contraction since the transition began, even these rates of unemployment must signify either serious overmanning or under-reporting of output. However, retaining workers in employment has been one way of continuing to provide them with social services, including housing. This practice cannot be continued indefinitely in the new economic environment in these countries, which makes the transition to strong growth ultimately essential.

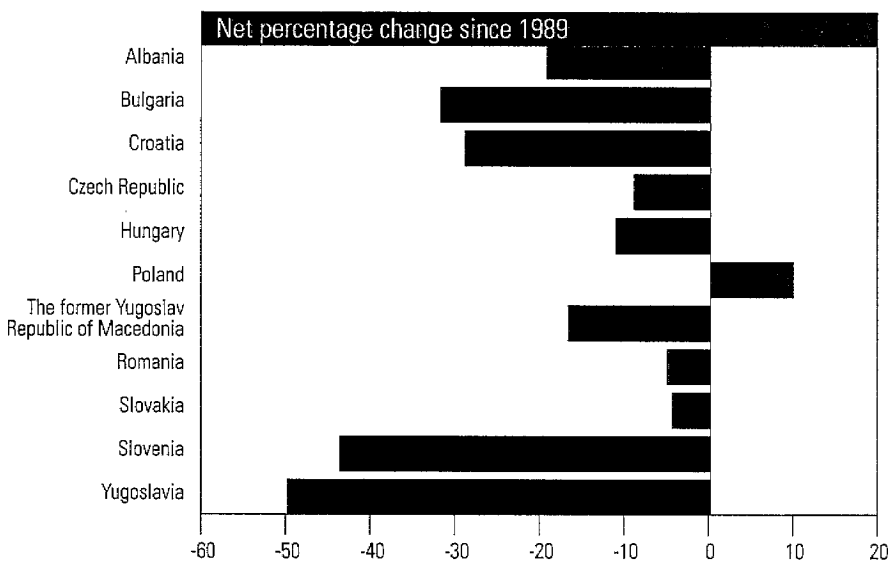
One of the conditions for the sustained revival of economic activity has been the achievement of macroeconomic stabilization. The progress achieved in 1996 can be seen in the decline in inflation, with rates in 1996 having fallen sharply below those of the preceding three years (see table II.2). The most spectacular progress against inflation was achieved in the CIS countries, Croatia and Yugoslavia, which had seen hyperinflation rates of over 1,000 per cent in the early 1990s. Such rates

5 However, the GDP level of 1989 in Poland was equal to the level of 1978.

6 Economic Commission for Europe, *Economic Survey of Europe in 1996-1997* (United Nations publication, Sales No. E.97.II.E.1), table 3.3.2.

7 In many of these countries, though, labour-force surveys show that the number of registered unemployed is considerably smaller than the number of jobless who are willing to work, the latter figure reflecting the definition of unemployment of the International Labour Organization (ILO). In the Russian Federation, for instance, 3.4 per cent of the labour force were registered unemployed in 1996, whereas unemployment had reached a level of 9.3 per cent by the ILO definition.

Figure II.3.
OUTPUT IN 1997 RELATIVE TO 1989
IN CENTRAL AND EASTERN EUROPE



Sources: National statistics and United Nations Secretariat outlook, based in part on Project LINK.

Table II.2.
CONSUMER PRICE INFLATION IN THE ECONOMIES IN TRANSITION, 1993-1996

Annual percentage change

	1993	1994	1995	1996
Central and Eastern Europe				
Bulgaria	73	96	62	123
Croatia	1 517	98	2	4
Czech Republic	21	10	10	9
Hungary	23	19	28	24
Poland	37	33	28	20
Romania	256	137	32	39
Slovakia	23	13	10	6
Slovenia	32	20	13	10
The former Yugoslav Republic of Macedonia	353	122	17	4
Yugoslavia	..[a]	..[a]	74[b]	91
Baltic States				
Estonia	89	48	29	23
Latvia	109	36	25	18
Lithuania	410	72	40	25
Commonwealth of Independent States				
Armenia	3 732	4 960	175	19
Azerbaijan	1 130	1 664	411	20
Belarus	1 191	2 220	709	53
Georgia	4 084	22 470	178	39
Kazakstan	1 663	1 880	176	39
Kyrgyzstan	1 209	278	43	30
Republic of Moldova	1 751	486	30	24
Russia	875	309	197	48
Tajikistan	2 885	350	682	422
Turkmenistan	1 631	2 714	..	..
Ukraine	4 735	891	377	80
Uzbekistan	1 232	1 550	315	..

Source: ECE, *Economic Survey for Europe in 1996-1997* (United Nations publication, Sales No. E.97.II.E.1), statistical appendix table B.7.

[a] Annual rates of hyperinflation of over 1 trillion percentage points.
[b] February-December over the corresponding period in 1994.

[8] As the high rates of inflation accompanied sharply falling output, it was evident that the inflation had been a question of rapid increases in money and credit and supply-related factors; as capacity utilization rates in the region are still low, inflation is still not fuelled primarily by demand.

had rendered rational economic decision making virtually impossible.[8]

Main dimensions of economic growth

In Central and Eastern Europe, with the exception of Hungary, domestic demand provided the main impetus to economic growth in 1996. Private consumption has been picking up in the region, partly as a result of real wage increases. The contribution of the foreign sector to growth was generally nega-

tive, as the volume of imports, often of investment goods, but also of consumer goods, grew more rapidly than that of exports. With strong foreign capital inflows, there had been an appreciation of exchange rates which was, however, a major factor in controlling inflation.

The strong economic performance of Poland, the country with the largest population of the CEETEs, reflected its progress towards building a modern economy. Poland has seen an acceleration in investment growth in every year since 1992 (see table A.10). The distribution of output is changing: the share of services rose from 35 per cent in 1991 to 52 per cent in 1996, that of industry and construction fell from 52 to 39 per cent and that of agriculture from 13 to 8 per cent. Domestic demand in Poland was encouraged by a sharp expansion in domestic credit, both to households and to businesses: total credits to businesses grew by 14 per cent in real terms and to households by 76 per cent; spending on cars and computers doubled in 1995-1996.

In Hungary, the stabilization package introduced in March 1995 was continued into 1996. This had the intended results: aggregate growth was weak but outright recession was avoided. The strong growth in exports and weak growth in imports, brought about not just by the currency's depreciation, but also by an import surcharge, helped to shrink Hungary's current account deficit from $3.9 billion in 1994 to $2.5 billion in 1995 and $1.7 billion in 1996. Fiscal austerity led to a fall in public consumption in 1996. A restrictive incomes policy brought about a decline in real wages for the second year running. The package appears to have laid the foundation for an improved economic performance.

In April 1997, the Czech Republic began a major macroeconomic policy adjustment, as the current account and fiscal deficits had widened appreciably. One of the underlying reasons for those imbalances has been that productivity did not grow as rapidly as real income for several years. Enterprises had received ample financing from majority state-owned banks and structural reorganization was not a high priority since export deliveries and domestic demand had grown strongly. With the appreciation of the currency as a result of financial inflows that were attracted by high interest rates — themselves associated with a tight monetary policy — exports fell after the second quarter of 1996 and industrial production slumped. This reduced tax revenues, contributing to the fiscal imbalance.

The April 1997 package included measures to cut imports and hold government spending below budget projections, including those for wages.[9] The fiscal tightening was accompanied by monetary easing: the minimum reserve requirements for banks were cut from 11.5 to 9.5 per cent of deposits. The Government also announced its intention to undertake institutional reforms: to speed up the privatization of banks and companies, to crack down on tax evasion and corruption, and to set up an independent watchdog to police the Prague stock exchange.

Of the countries that were formerly part of the Socialist Federal Republic of Yugoslavia, Croatia and Slovenia registered strong rates of growth in 1996 and an acceleration in 1997 is anticipated (see table A.3). In both countries, the revival of tourism was an important source of renewed economic vigour. The former Yugoslav Republic of Macedonia continued the stabilization exercise launched in early 1995, with substantial success. Inflation is estimated to have declined in 1996 to about the lowest rate among the transition economies. An

9 Importers will have to deposit 20 per cent of the value of consumer goods and foodstuff imports in non interest bearing accounts for a period of 180 days. To help reduce the fiscal deficit, an $855 million reduction in projected budget spending is to be achieved by curbing the growth of public-sector wages from the initial projection of 11.9 per cent to 7.3 per cent, and by cuts in outlays for budgetary institutions, transfers to the population, state investment and non-investment subsidies.

acceleration in growth is expected for 1997.

Bosnia's economy grew by about 40 per cent in 1996, but GDP was nevertheless only one third of its pre-war level. It is estimated that in the territory of the Muslim-Croat Federation in Bosnia, industrial output recovered to 85 per cent of its pre-war level. Economic growth in the area of the Republika Srpska (Serb Republic) was close to zero; wages are one third of the level in the Federation and inflation is high. The unemployment rate in Bosnia as a whole fell to some 50-60 percent of the labour force from its worst point, 90 per cent. About 200,000 jobs were created through international reconstruction assistance. Foreign trade turnover increased briskly and prices have been stabilized. The European Union-World Bank donor conferences in December 1995 and April 1996 raised $1.8 billion but Bosnia is finding it difficult to fulfil the conditions set by the multilateral organizations.

Of the three Baltic States, Estonia has had the most consistent GDP growth (see table A.3). Reliance on re-exports of Russian oil, metals and raw materials as the principal vehicle of economic activity in the early days of the transition has been replaced by the recovery of indigenous manufacturing and, in particular, the service sector. A rapid and extensive privatization programme, the strict financial discipline of a currency board and a highly liberal trading regime provided a foundation for a rapid economic transformation. The country's financial sector is strong, with robust credit growth and with the banks having a bad debt ratio of less than 5 per cent.

Latvia seems poised for an acceleration of growth in 1997, owing to the reduction of interest rates as a result of fiscal consolidation, the strengthening of the banking system in the aftermath of the 1995 crisis and a continuation of the privatization process. Lithuania appears to be continuing on a gradually accelerating growth trend.

With small domestic markets and a very limited resource base, in particular, for energy, the foreign economic ties of all the Baltic States remain critically important. At present, a significant share of GDP, in particular in Latvia (22 per cent in 1996), is tied to transit fees, primarily for Russian exports. The long-term sustainability of economic growth could be significantly enhanced by the further development and diversification of the range of products and services that the three economies provided competitively.

Output fell 6 per cent in the Russian Federation on an officially reported basis in 1996. However, other data suggest that the actual decline may be overstated by the GDP data, owing to their limited coverage of the "shadow" economy (see the introduction to the statistical annex below). In particular, reported disposable household income in 1996 was about the same as a year earlier and the reported share of the population with monetary incomes below the subsistence level fell to 22 per cent compared with 25 per cent in 1995. In addition, in January 1997, Goskomstat, the State Statistical Committee, revised its methodology and increased its estimate of unregistered economic activity from 20 to 23 per cent of officially reported GDP.

Despite these caveats about data quality, the evidence shows that a major contributor to the Russian Federation's continuing economic decline was the factor of gross fixed investment, reported to have contracted by 18 per cent, even more than in 1995 (see table A.10). The decline was particularly steep in manufacturing, especially in the sectors serving consumer demand (light

industry and building materials) as well as in agriculture (where investment fell by 31 per cent). At the same time, investment in energy and industrial infrastructure is stable and, in some sectors, is even growing.

One principal source of the disappointing performance of the Russian economy, especially with respect to investment, was the dampening effect of political instability. Since 1995, the principal obstacle to the normalization of economic activity and resumption of economic growth has been the inconsistent, unpredictable and excessively discretionary regulatory, legal and administrative environment. Contrary to expectations, political uncertainty did not end with the mid-year re-election of the President, but continued through the winter. As a result, the non-state sector did not redirect its financial resources from financial speculation to investment in the real economy.

Such was the lack of confidence in the currency and in the banking system that individuals preferred to hold much of their savings in the form of foreign currency rather than deposit them in the domestic banking system, and this development continued into early 1997.[10] Funds that were deposited with domestic banks were not used to extend the kind of medium-term credit needed for investment. The tight monetary policy required to control inflation resulted in a very high yield on short-term (mostly three-month) treasury bills. With such returns being available on Government paper, there was little incentive for banks to extend credit to industry.

In 1995, only two CIS countries had expanding economies, Armenia and Georgia, the output of both having suffered an earlier, nearly catastrophic collapse. In 1996, both countries continued to enjoy strong rates of recovery, while their Governments' efforts to implement strict monetary and fiscal policies had resulted in a sharp fall in inflation.

Growth also resumed in other CIS countries in 1996 (see table A.3). In Kazakstan, for example, demand was buoyed by an increase in foreign direct investment that helped bring about a recovery in the extractive sector. Tough fiscal and monetary policies brought inflation down to around 1 per cent a month by early autumn, and the budget deficit was kept under 3 per cent of GDP. In Kyrgyzstan, investment showed spectacular increases in 1995 and 1996, abetted by inflows of foreign direct investment and international credits. The budget deficit was cut from over 15 per cent of GDP in 1995 to around 6 per cent in 1996. In contrast to many other CIS economies, this was achieved by slashing government expenditure, not by trying to increase budget revenues. Yet the social situation is dire, with over half of the population reported to be living below the official poverty level, with real wages falling and with unemployment growing. In the Republic of Moldova and Ukraine, output continued to decline in 1996. Hostilities in Tajikistan have resulted in a suppression of output and have continued to discourage the exploitation of its rich mineral deposits.

Selected policy departures

Transition is a long process that involves many elements — opening of enterprises and households to market processes, including liberalization of trade policy; "corporatization" and a consistent privatization policy; and fiscal and monetary discipline; as well as fostering of those elements of civil society

10 In the first months of 1997, a quarter of Russians' total income was spent on purchases of US dollars. This proportion was considerably higher than in the two preceding years (14 per cent and 18.5 per cent in 1995 and 1996, respectively). It is conservatively estimated that the country's population holds between $20 billion and $30 billion in foreign currency (overwhelmingly US dollars).

that were missing under the previous system. These include such practices of "good governance" as ensuring an honest and competent civil service, a transparent and fair tax structure, clearly defined property rights, courts that operate impartially and that enforce these and other rights, stable and transparent regulations, and measures to effectively combat corruption. In addition, transition economies have needed to develop bankruptcy proceedings, prudent management practices for banking institutions, pension, health-care and unemployment systems that do not impose an excessive burden on public finances, data-collection agencies, and non-governmental organizations such as trade unions, management groups and private foundations.

This much has been understood for some time and many Governments have actively sought to move along such a policy reform path for several years. Others have opted to follow such a path more recently. Bulgaria, Romania and Ukraine, in particular, are three countries making strong efforts to break with their past record of hesitation and ambivalence in economic and structural reform.

As of the beginning of 1996, Bulgaria had not reformed its state-owned industries through privatization, restructuring or closure: the state-owned sector still contributed 85 per cent of industrial output and was incurring heavy losses as a result of a lack of managerial accountability. The banking sector was also largely unreformed. With lending to state and privately owned enterprises mounting, in late 1995 some banks experienced liquidity problems when, as a result of rising inflation, the authorities had sought to restrict credit, and the banks to obtain payments from their borrowers. By mid-1996, the difficulties in the banking sector had turned into a full-scale run on the banks by the public. Several commercial banks were closed, the activities of others were suspended and 15 were placed under supervision. Effective real interest rates reached very high levels and credit activity came to a virtual halt. Businesses could only rely on internally generated funds to finance their operations, and business activity sank precipitously.

In the face of the economic crisis, in March 1997, the Bulgarian Government introduced a new economic stabilization programme. The Government's plans included a rapid privatization of state banks and industries through cash sales to foreign interests, with the proceeds from the sales being transferred to the budget in a transparent manner. The deadline for completing the privatization is December 1998. The Government also introduced a currency board to fix the exchange rate and deprive the Central Bank of the power to finance the budget deficit or the banking system through issuance of money. In 1996, the budget deficit was estimated at 11 per cent of GDP and almost all of it had been monetized.

In Romania, significant components of initial liberalization programmes had been taken back after 1991: prices were still controlled and investment by state-owned enterprises was distorted by subsidies and credits from the state-owned banks. A new Government came into office in November 1996 and in mid-February 1997 it unveiled an austere and comprehensive economic programme. The key elements included price liberalization, liberalization of the foreign exchange market, reductions in tariffs on agricultural goods, reduction of the consolidated budget deficit, and the elimination of hidden subsidies and of National Bank direct credits. Most prices, including the exchange rate, were liberalized on 18 February 1997. Also, to discourage short-term speculative

inflows, the Government imposed a 28 per cent capital gains tax on foreign portfolio investments held less than a year (compared with 18 per cent on those held more than a year).

Major actions were initiated to accelerate privatization, restructure or close state-owned enterprises and reform the agricultural sector. A total of 3,600 enterprises are to be privatized by the end of 1997, including the six largest commercial banks. The companies will be offered to the highest bidder without a minimum price, with there being equal access and treatment for all potential buyers, local or foreign. Also, foreign ownership of land is allowed.[11]

In Ukraine, the authorities took major steps in 1996 towards deep economic reform. Implementation of a strict monetary and fiscal policy resulted in a dramatic decrease in inflation. Foreign reserves benefited from an increase in exports, inflow of foreign capital, and resumption of a standby programme with the International Monetary Fund (IMF) in May 1996. This permitted the Government to introduce a full-fledged national currency, the hryvnya. This step was viewed in the country both as a milestone and as an important component in Ukraine's economic transformation.

Given the difficulties of the starting points, in none of these three countries is output expected to respond to the new policy departures this year. In the Russian Federation, however, where strong policy measures have been taken at various points since 1992, albeit often not sustained (see chap. VII), 1997 may finally be the year in which reported output again begins to grow.

Developments in the Russian Federation were again inconsistent in 1996. Private firms that had originated in the private sector (and not as converted state enterprises) accounted for 38 per cent of GDP in 1996, up from 25 per cent in 1994. By the same token, the GDP share of state-owned enterprises fell from 38 to 23 per cent. Also, the consolidated budget deficit for the first 11 months of 1996 fell to 4.1 per cent of GDP and the federal budget deficit fell to 3.3 per cent. However, only 70 per cent of planned revenues were realized and the budget outcome was thus misleading: it was achieved by across-the-board reductions in government outlays and through payment arrears.

A new economic programme was thus outlined by the President of the Russian Federation in his March 1997 State of the Nation address to the Parliament. This stressed fiscal reform as the key economic task of the year with renewed efforts to raise tax revenues and spend them efficiently on the most socially important programmes. A new tax code was to simplify the tax system and abolish its numerous exemptions. All fiscal payments, both revenues and expenditures, were to be channelled through the Federal Treasury system instead of through commercial channels. All government procurement would be made through the process of open competitive bidding.

The Government's economic programme for 1997 also focused on eliminating the remaining institutional, administrative and regulatory obstacles to the realization of the country's potential for economic growth. Indeed, within a month, the Government made the first steps in two extremely sensitive areas: "natural monopolies" (namely, major energy companies, railroads, electricity grids) and a reform of "communal services" that will entail steep increases of rents and fees for household energy, water and so forth.

The measures in the Government's programme and a new confidence in economic management may enable the Russian Federation's economy to grow at

11 In order to mitigate the short-term costs of these measures, in the form of higher prices and increasing unemployment, the share of allocations for social purposes in the budget has been set to increase.

Table II.3.
DEVELOPING COUNTRIES: RATES OF GROWTH OF GDP, 1982-1997

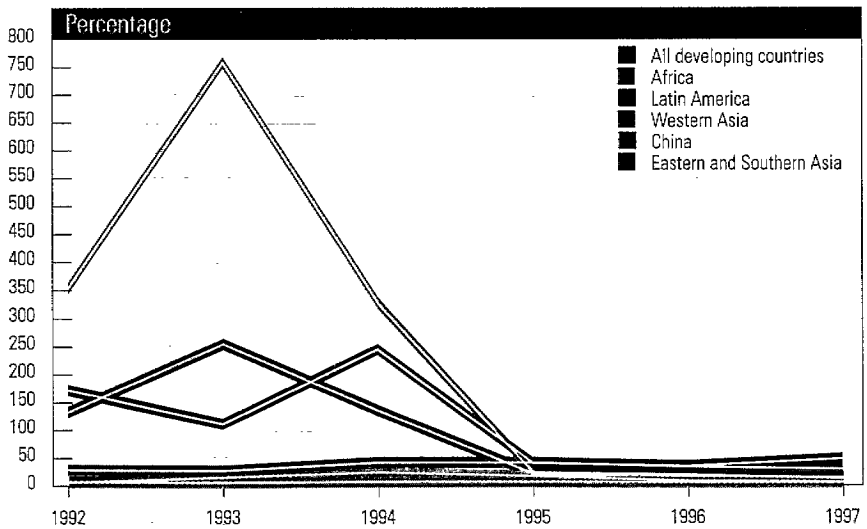
Annual percentage change

	1982-1992	1993	1994	1995	1996[a]	1997[b]
Developing countries[c] of which:	3.0	5.2	5.6	4.6	5.7	6
Latin America and the Caribbean	1.4	3.6	5.5	-0.1	3.7	4 ¼
Fuel exporters	1.6	2.0	3.9	-3.6	3.8	4
Fuel importers	1.3	4.5	6.3	1.8	3.6	4 ¼
Africa	1.5	-0.4	2.1	2.8	4.3	4
Fuel exporters	2.0	-1.6	0.6	3.5	3.7	4
Fuel importers	1.2	0.4	3.2	2.4	4.7	3 ¾
Western Asia	-0.3	4.1	-0.9	3.5	5.0	5 ¾
Eastern and Southern Asia[d]	5.9	5.9	7.0	7.3	6.5	6 ¼
Memo item:						
Sub-Saharan Africa (excluding Nigeria and South Africa)	1.1	-2.7	1.5	4.2	4.8	4 ¾
Least developed countries	1.6	-0.8	2.0	4.5	5.0	4 ¾
Major developing economies						
China	9.1	13.5	12.6	10.5	9.7	10
Argentina	0.8	6.4	7.4	-4.6	4.4	5 ¼
Brazil	1.6	4.1	5.8	4.1	3.0	3 ¾
India	4.4	3.9	5.4	6.7	6.4	6 ½
Indonesia	5.1	6.5	7.5	8.1	7.8	7 ½
Iran (Islamic Republic of)	3.2	1.8	0.0	1.0	5.0	3 ½
Republic of Korea	8.2	5.8	8.6	8.9	7.1	5 ½
Mexico	1.4	1.9	4.6	-6.2	5.1	4
Saudi Arabia	-2.2	1.6	-2.7	1.5	5.0	3 ½
South Africa	0.5	1.3	2.7	3.4	3.1	2 ¾
Taiwan Province of China	7.3	6.3	6.5	6.1	5.7	6 ¼
Thailand	7.4	8.3	8.7	8.6	6.7	6 ½
Turkey	3.7	7.7	-4.7	7.9	7.0	4 ¾

Source: United Nations.

a Preliminary estimates.
b Forecast, based in part on Project LINK.
c Covering 95 countries that account for 98 per cent of the population of all developing countries.
d Excluding China.

Figure II.4.
INFLATION IN DEVELOPING COUNTRIES, 1992-1997



Sources: United Nations, based in part on IMF, *International Financial Statistics.*

last, albeit modestly, in 1997. Interest rates have already declined substantialy, alongside the fall in inflation and increased confidence in the economy; for example, the yield on treasury bills, which had exceeded 200 per cent in 1996, declined to 30 per cent in March 1997.

THE DEVELOPING ECONOMIES

Economic growth in developing economies accelerated in 1996 and is expected to rise again in 1997 (see table II.3). The stronger growth can be seen in Latin America and Western Asia, while Africa appears to be maintaining its recent greater dynamism; and the strong overall growth in Eastern and Southern Asia and China continues but at moderated rates. The least developed countries meanwhile are in their third year of relatively strong growth and rising per capita output. Inflation continued to decline in all developing regions in 1996 and is expected to sustain that trend in 1997 (see figure II.4).

Africa: economic recovery builds momentum

The most significant economic development in Africa is the return to rising GDP per capita in 1996 and its anticipated continuation in 1997. The recovery was rather widely shared, with at least 22 countries reaching a GDP growth rate of 5 per cent or higher[12] and 11 reaching a rate of 6 per cent or higher in 1996.[13] GDP declined in only 2 countries of the 44 for which estimates were available in 1996 — Burundi and the Central African Republic — and in both cases the decline was associated with political considerations. It appears that 1996-1997 may mark the first time since 1979-1980 that the average GDP per capita of Africa has increased for two consecutive years. Nonetheless, this follows on a protracted decline. A higher and sustained growth rate will be required to alleviate widespread poverty and reduce high unemployment and

12 These countries are Angola, Benin, Botswana, Burkina Faso, Chad, Congo, Côte d'Ivoire, Equatorial Guinea, Ethiopia, Ghana, Malawi, Mali, Mauritius, Morocco, Mozambique, Rwanda, Senegal, Sudan, Tunisia, Uganda, Zambia and Zimbabwe.

13 The United Nations New Agenda for the Development of Africa in the 1990s (General Assembly Resolution 46/151 of 18 December 1991, annex, sect. II) specified at least 6 per cent growth of gross national product (GNP) as being needed to promote sustained and sustainable development in the countries in the region.

underemployment. Indeed, if economic growth continues at the current pace it will take more than 10 years just to recover the GDP per capita level of 1980.

The improvement in output growth since 1994 in Africa can be attributed to a number of international and domestic economic developments and improved weather conditions. Some of these factors cannot be expected to continue. In particular, higher commodity prices, particularly during 1994 and 1995, and higher oil prices in 1996 played a critical role. Moreover, favourable weather conditions in 1996 enabled a strong recovery in agricultural output. Africa has also benefited from strength in international demand for African exports, which is expected to be sustained in 1997 and 1998.

Other factors have been of a more lasting nature. Improved and sustained macroeconomic stability and policy reforms which can be discerned in a growing number of countries have created a more conducive environment for investment in some cases and removed obstacles to increasing production in others.

GDP growth in Africa is expected to slow slightly in 1997, as the effect of recovery from drought, which helped fuel growth in 1996, will wear off and the stimulus from strong commodity prices is forecast to diminish further in 1997. Growing conditions for the 1997 agricultural crops have so far been generally favourable in most regions with the exception of Northern and Eastern Africa. The forecast also looks towards greater political and social stability, greater internal peace and an end to civil strife and instability which have affected several countries on the African continent.

Growth in the agricultural and mining sectors was the largest contributor to the higher growth rate of GDP of Africa in 1996. Higher agricultural production was particularly important in all countries of Northern Africa and in most countries of Southern Africa where agricultural output recovered from the drought-affected output of 1995. Cereal production alone is expected to have increased by 59 per cent in 1996 in Northern Africa and by 68 per cent in Southern Africa. In Morocco, cereal production increased by more than five times in 1996, fuelling a GDP growth that reached 10 per cent. In the Republic of South Africa as well, the agricultural sector gave the main impetus to GDP growth, taking over from manufacturing as the fastest-growing sector.

In many African countries, increased output of food staples contributed to improved food security, lower food import costs, higher rural incomes and lower inflation. Record grain harvests in Ethiopia for the second consecutive year stimulated growth in other sectors of the economy and eliminated overall food deficits that had plagued the country in recent years.

However, in at least some regions of Cape Verde, Eritrea, Kenya and Somalia, drought in 1996 led to substantially reduced harvests and increased food aid or food import requirements. Emergency food aid shipments were required in Burundi, Rwanda and eastern Zaire as a result of the movements of large numbers of refugees and displaced persons in those countries. Food production declined in parts of Uganda and the Sudan where civil unrest disrupted rural agricultural activity, and in Liberia and Sierra Leone, food production remained below the pre-conflict levels.

Output of minerals and metals increased in such countries as Zaire, Zambia and Zimbabwe, and mining also provided a major impetus to GDP growth in several countries. Higher prices in recent years, new mining codes, with more clearly defined rights and obligations of foreign investors, and aid-

financed geologic surveys contributed to a large increase in the number of explorations for mineral deposits in the last few years and these have had notable success. Gold production in particular has increased rapidly in several countries in Western and Southern Africa (except in the Republic of South Africa). Output of diamonds contributed significantly to the rise of GDP in Botswana and Namibia.

Rising oil prices during the last two years contributed to higher export earnings and government revenues and expenditures and thus to faster economic growth in the oil-producing countries. The GDP growth rate for the fuel-exporting countries increased from almost nil to almost 4 per cent between 1994 and 1996 (see table II.3). Oil production increased in most oil-producing countries in 1996 (except Cameroon). Stronger export earnings allowed higher imports of capital goods and intermediate inputs, easing supply constraints and contributing to higher growth, particularly in those countries, such as Algeria, where foreign exchange shortages had limited growth. Higher oil prices also contributed to the improvement in economic growth in the central part of the Communauté financière africaine (CFA) franc zone, whose recovery after the CFA franc devaluation of January 1994 has lagged behind that in the western part of the zone.

However, higher oil prices and higher GDP growth were accompanied by rather poor performance particularly in the manufacturing sector, in a number of fuel-producing countries, such as Algeria, Cameroon and Nigeria. In Algeria, industrial production declined in 1996 as a result of import liberalization and tightened credit; and in Nigeria, capacity utilization remained very low in 1996 owing to weak demand and infrastructure problems.

In a few other countries, manufacturing was among the fastest-growing sectors in 1996, but from a small base, and the contribution to GDP growth was therefore still small. Manufacturing production began to recover in Zambia after three years of decline. In Côte d'Ivoire, the manufacturing sector continues to benefit from the devaluation of the CFA franc in January 1994 and exports to other countries in the region especially have increased. Moreover, local capacity for processing of cocoa and production of processed food is expanding in Côte d'Ivoire. Manufacturing output linked to the processing and distribution of agricultural commodities showed strong growth in several other countries as a direct result of the recovery of agriculture and growth in demand for consumer goods boosted by income growth.

A number of countries continued to make considerable headway in establishing macroeconomic stability and reforming economic policies in 1996. The improvement in growth of GDP in the last two years can be partly attributed to these policies (although their impact is hard to quantify).[14] This improvement can be seen in a few countries, such as Côte d'Ivoire, Egypt and South Africa, where investment has been a driving force behind the recent recovery and is improving the prospects for sustained economic growth.

Several countries in the region deepened structural reforms in recent years and many accelerated their privatization programmes. Since 1994, Algeria has liberalized domestic prices, the foreign exchange market and trade and has achieved a considerable degree of macroeconomic stability with the support of external finance and debt relief. In Egypt, economic reforms gained momentum with the appointment of a new Government in January 1996 which has accelerated the privatization programme, reduced food subsidies, further liberalized trade, reformed

[14] Countries that undertook considerable policy reforms in the 1980s and early 1990s added an average of 2 percentage points, at the most, to their GDP growth rates (See, for example, Susan Schadler and others, "IMF conditionality: experience under standby and extended arrangements, part I: key issues and findings", *Occasional Paper*, No. 128 (Washington, D.C., IMF, September 1995), p. 43; and World Bank, *Adjustment in Africa: Reforms, Results, and the Road Ahead* (Oxford, United Kingdom, Oxford University Press, 1994, p. 138).

investment legislation and partially removed rent controls. Ethiopia, Kenya, Uganda and Zambia have also made significant gains in their reform efforts.

Concerns about unemployment

Unemployment is a primary concern of African Governments. While the labour force has grown rapidly, years of economic stagnation, restructuring of the public sector, privatization and trade liberalization have curtailed formal employment in the private and public sectors. Unemployment rates are particularly high among youth and the educated and national rates reach double digits, inter alia, in Algeria, Morocco, South Africa, Zambia and Zimbabwe. Moreover, the recent economic growth spurt has not yet led to substantial employment growth. South Africa, for example, has over the last few years experienced a nearly "jobless recovery". While GDP growth has been positive since 1993, formal non-agricultural employment has declined every year since 1989 except 1995. The Government aims at creating a substantial number of jobs by the year 2000 through education and skill development, investment in infrastructure and the promotion of labour-market flexibility.

Privatization, as a part of structural reform programmes aimed at improving economic efficiency, has been implemented by an increasing number of countries in Africa. However, the short-term consequence has been the reduction of employment. The Government of Egypt, for example, is concerned about the effect of privatization on employment. The unemployment rate is officially estimated at 9.4 per cent but other sources indicate that it might be substantially higher. Algeria and Morocco face a similar predicament. Algeria is to accelerate its privatization programme in the near future and this is likely to entail considerable loss of employment while unemployment is already high. The privatization programme in Morocco started in early 1993 after the Privatization Law in 1989 mandated the sale of a large number of companies. These companies were selected, however, because they did not have problems of overstaffing (so as to avoid adverse effects on employment). This first phase of privatization is drawing to a close and a second phase might have larger effects on unemployment.

Improving price stability

Inflation has been declining since 1995 in many African countries as a result of fiscal consolidation, restrictive monetary policies and good harvests, and the trend is expected to continue in 1997.[15] In the CFA zone, inflation the trend rates fell below double digits in all countries — and in most countries to below 5 per cent — as the jump in prices following the devaluation of the CFA franc in January 1994 petered out. Inflation rates are expected to decline in 1997 to 3-4 per cent. Fiscal and monetary policy has been tightened in Guinea-Bissau, where the inflation rate was 55 per cent in late 1996. It is planning to join the CFA franc zone in May 1997 and is thus aiming to bring its inflation in line with that of the other CFA franc zone members.

In Ghana and Nigeria, inflation has been reduced drastically since 1995. In Nigeria, the annualized monthly rate of inflation dropped from a high of 90 per cent in mid-1995 to 28 per cent at the end of 1996, the lowest rate since the beginning of 1992. This was mainly a result of tight monetary policy and fiscal consolidation. The Government of Nigeria virtually eliminated its large budget deficit in 1995 and reported a budget surplus for 1996, aided by higher oil

15 The exceptions in a few larger countries are expected to raise the average inflation rate for the region in 1997 (see table A.13).

prices. However, an expansionary budget was announced for 1997. In Ghana, as well, the inflation rate declined steadily from 74 per cent in 1995 to 34 per cent in 1996, mainly as a result of a good food crop, although a restrictive monetary policy also played a role.

Kenya successfully implemented fiscal consolidation policies to contain government spending and budget deficits but rising food prices in 1996, as a result of the drought, and higher fuel import costs, caused inflation to increase from 1 per cent in 1995 to 9 per cent in 1996. Rising costs of imports also led to higher inflation in 1996 in the Sudan and in countries in Southern Africa whose currencies are tied to the depreciated South African rand.

Latin America and the Caribbean: return to the 1990s growth path

Economic growth in Latin America and the Caribbean is gathering speed, with strong export growth in many countries and with business confidence and foreign capital flows encouraged by the continuity in economic policy displayed since the Mexican crisis. Output in the region is growing at about 4 per cent a year again, after the decline in 1995 (see table II.3). GDP expanded in 1996 at a rate of 5 per cent or more in seven countries,[16] while the pace of the recovery in the countries hit by recession in 1995 (Argentina, Mexico, Uruguay) exceeded most forecasts in the second half of last year. Prospects for growth, however, fall short of the region's trend rate of growth of 5.5 per cent per year between 1945 and 1980. They also are still far from the 6 per cent annual rate deemed necessary to reduce growing unemployment and address urgent social needs.[17]

At the same time, regional inflation continues its decline towards single digits (see table A.13). Further curbing of inflation remains a priority for the Governments of the region. To this end, fiscal austerity and tight monetary policies prevail. The tendency was relatively uniform, as inflation was lower in 10 countries and stable in 11 others.[18] In particular, in Argentina, price rises were, at less than 1 per cent, among the lowest in the world, while in Brazil, they were, at 10 per cent, the lowest since 1950. The main exception to this was Venezuela, where inflation soared to a record of 100 per cent, following price liberalization and a major devaluation as part of the adjustment plan; but even there the rate should drop by at least half in 1997. Inflation will also continue to decline in Chile, Colombia, Mexico and Uruguay, but will rise in Ecuador, amid higher utility prices and import duties.

Buoyant exports and external finance were particularly important in the 1996 turnaround of the economies of Argentina, Mexico and Uruguay and, in the continued strong expansion of Chile, experiencing its thirteenth consecutive year of growth. The recovery in the demand in the first three countries was led by investment, while the rise in consumption was constrained by rising unemployment.

Argentina continues to capitalize on export opportunities, especially to Brazil, resulting from almost full implementation of the Southern Cone Common Market (MERCOSUR) and the appreciation of the Brazilian real. In addition, exports were boosted by favourable international prices for grains and oil. A further stimulus to the economy came from the return of funds to the banking system and the consequent growth in credit around mid-year, as business confidence strengthened.

16 Barbados, Chile, Cuba, Guyana, Mexico, Nicaragua and Uruguay.

17 See, for example, Economic Commission for Latin America and the Caribbean (ECLAC), *The Equity Gap: Latin America, the Caribbean and the Social Summit* (LC/G.1954(CONF.86/3)), 18 March 1997, "Summary and conclusions", para. 2.

18 See ECLAC, *"Preliminary Overview of the Economy of Latin America and the Caribbean, 1996"* (United Nations publication, Sales No. E.96.II.G.13), Santiago, Chile.

Similarly, Mexico's recovery was led by manufactured exports, still benefiting from the devaluation of the peso at the end of 1994. However, real incomes have fallen by one fifth since the devaluation. This explains the unevenness of the rebound, which has increased the gap between the modern export sector — whose output has doubled in the last six years, and which accounts today for 30 per cent of total production — and the still-depressed non-tradable sector. With investment extending to the construction sector and private consumption gradually joining in the rebound, the year 1997 should witness a strengthening of domestic demand.

Venezuela underwent a major adjustment programme, as noted above, which led to an erosion of real wages and a slump in domestic demand. As a result, Venezuela was the only large country in the region to experience a recession in 1996, despite the expansion of the oil sector. In the second half of the year, however, the economy started to rebound, supported by unexpectedly strong international oil prices and large-scale capital inflow. This year's expansion, expected to be around 4 per cent, is led by domestic demand, and especially by investment in the oil sector, both by the state oil company and by foreign enterprises.

Measures taken by Brazil's Government to cool down the economy, which had begun to overheat since the introduction of the Real Plan in 1994, dampened its rate of growth between 1995 and 1996. As credit expanded, output recovered gradually in the second half of 1996, driven by demand for consumer durables associated with real wage gains, while investment and exports lagged. Although labour markets improved slightly in the last quarter, the average unemployment rate for the whole year edged up from 4.6 to 5.4 per cent, reflecting primarily a further large decline in industrial employment. This deteriorating trend, started in 1987, stems from import competition, the squeeze of profit margins and technological modernization. In the presence of fairly rigid labour costs, firms shift to increasingly capital-intensive technology. Their investment is predominantly capital-deepening and embodies a search for higher quality through the use of imported intermediate goods. This appears to be affecting mainly less skilled workers and the lower income earners.

In some other countries, economic dynamics are heavily affected by political and security factors. Haiti is a case in point. Violence and unrest continue, fuelled by persistent high levels of unemployment, a rising cost of living and impatience at the slow pace of economic recovery.[19] The adoption of economic reforms, including partial privatization of nine state enterprises, has been delayed by the lack of political consensus, and this has held up the release of a large part of international aid. The lack of private investment, the partial suspension of foreign funding and Haiti's limited absorption capacity led to a deceleration of growth to under 3 per cent in 1996. The economy is not expected to recover in 1997, owing to the failure to launch infrastructure projects, combined with continuing low investor confidence.

Persisting high unemployment and poverty

Poverty in Latin America and the Caribbean still affects over two fifths of the population — about 200 million people — and is affecting them more than ever before.[20] The recent recession in Argentina, Mexico and Venezuela, and the associated rise in unemployment increased the number of households below the poverty line in these countries. However, the recent sharp decline in

19 See "Report of the Secretary-General on the United Nations Support Mission in Haiti" (S/1997/244), 24 March 1997, sects. II and VI.

20 See ECLAC, *Social Panorama of Latin America, 1996* (United Nations publication, Sales No. E.97.II.G.4).

inflation in Brazil and the strong growth of Peru in 1995 and Chile in 1995 and 1996 have led to a decline in poverty in these economies. In the majority of other countries, poverty remained stable or decreased slightly. In addition, an asymmetry has been observed in the response of unemployment to contractions and expansions in economic activity. A sharp increase in open unemployment followed recent recessions in Argentina, Mexico and Venezuela. However, in Chile and Peru it has proved difficult to achieve a larger reduction in unemployment despite their vigorous economic growth in the last few years, as competitive restructuring in modern enterprises favours productivity increases and labour flexibility, with a decline in job creation per unit of output.

Overall, urban unemployment in Latin America, currently at an average of 7-8 per cent, has reached its highest level so far this decade. It remains especially high in Argentina (with the highest level in the region, 17 per cent), Colombia, Panama, Uruguay and Venezuela, mainly reflecting sluggish job creation. In contrast, the number of unemployed declined last year in Chile, Nicaragua and Peru. Moreover, over 40 per cent of urban employment is represented by low productivity, and low wage jobs, and the trend is not showing signs of improvement.

Indeed, an important feature of urban poverty in the region is that it affects not only the large share of workers in low-productivity, informal jobs, but also a high percentage of unskilled labour employed in the formal economy. Because of the low incomes associated with low-skilled job categories, in 7 of the 12 countries examined by a recent ECLAC study,[21] between 30 and 50 per cent of salaried workers in such categories in the private sector (excluding micro-enterprises) live in households with incomes below the poverty line. In terms of combating high unemployment and poverty, crucial factors besides the level of economic growth and inflation reduction are continuing the effort to increase social expenditure and to find more efficient ways to allocate it.

The ultimate requirement for poverty alleviation and unemployment reduction is sustained economic growth at a strong pace. This entails both high overall investment and savings and strengthened human capital development. Thus, several countries are increasing efforts to improve education systems to enhance labour skills (Argentina, Colombia, Mexico and, starting from lower spending bases, Bolivia and Paraguay). As to the saving-investment nexus, at 19 per cent of GDP in 1996, saving is at the highest level since 1990; but it is both lower than the Latin American average in the previous decade and much lower than that of the more dynamic economies of South and East Asia (see table A.11). However, the rapid rebound of financial flows after the 1995 crisis is a vote of confidence in both growth prospects for the region and the continued commitment to economic reform.

A sound and efficient financial system is another condition for sustained economic growth. The Mexican crisis revealed the fragility of several banking sectors in Latin America and that there is a need for better supervision and regulation of the recently liberalized industry in order to cope with the world's ever-increasing financial integration.[22] In Argentina, Brazil, Mexico and Venezuela, measures have been taken — often with the help of international financial institutions — to this end, but strengthening supervision will take time.

While economic reforms implemented in the 1990s have placed much of the region in a stronger macroeconomic position and have set in motion the

21 Ibid., chap. I, sect. 4.

22 See *World Economic and Social Survey, 1996* (United Nations publication, Sales No. E.96.II.C.1 and Corr.1), chap. II, box II.2.

structural transformation of the economies of the region, the slow realization of a "reform dividend" is making voters increasingly sceptical of the rationale behind these policies. So far, attempts at addressing social needs have had limited results, and reforms have yet to deliver concrete benefits to the general population. Continued popular support for current economic strategies is not unconditional and dissatisfaction is beginning to build.

Eastern and Southern Asia and the Pacific: rapid growth rates cooling

While continuing the phenomenon of sustained rapid economic expansion, growth in the Eastern and Southern Asia region decelerated in 1996 owing to the slowdown in the rapidly growing countries (Indonesia, Republic of Korea, Malaysia, Singapore and Thailand). The regional rate of economic growth is expected to continue in 1997 at about the same rate for similar reasons. More restrictive monetary policy reined in economic expansion in these countries in order to bring about more sustainable growth. In addition, export growth weakened more than expected in the second half of the year owing to a substantial slowdown in world trade, and the cyclical downturn in international demand for semiconductor and information technology products, as well as the appreciation of the dollar against the yen.

Structural problems of differing severities in individual economies accentuated the slowdown. The long-term decline of competitiveness of traditional exports threatens sustained high export growth in a number of economies. In addition, in the Republic of Korea and Thailand in particular the fragility of the financial system has become a serious concern. Indeed, these are the main reasons that the return to very high growth rates is not expected this year.

Although at significantly different levels of development, both the Republic of Korea and Thailand have a weak system of regulation and supervision and poor risk management in the financial sector, which have resulted in a high level of bad debts and the collapse of major financial institutions since returns to investment plummeted during the economic downturn in 1996. The central banks have increased liquidity to limit the repercussions but domestic investment can be expected to be restrained by a credit squeeze and weakened investor confidence.

Two consecutive years of slower growth have raised the question of whether this is a temporary setback or a longer-term trend. The situation has highlighted the importance of continued technological upgrading of production and economic reform, particularly of financial institutions, in sustaining rapid growth. Sustained high growth will depend on a continued high rate of investment in human as well as physical capital and the ability to assimilate technological and managerial expertise from more advanced countries.[23]

The economies of Hong Kong and Taiwan Province of China are expected to continue recent growth trends in 1997, with GDP rising 5.5 per cent and 6.3 per cent, respectively. They will benefit from the recovery of world trade and, in the case of Taiwan Province of China, the upturn in international demand for semiconductors and information-technology products. The strengthening of exports and imports of China can be expected to provide added impetus to both economies. Investor confidence and private investment are expected to remain strong in Hong Kong as major public investment pro-

[23] For discussion of whether high growth can be sustained in Asia, see, for example, S. Collins and B. Bosworth, "Economic growth in East Asia: accumulation versus assimilation", in *Brookings Papers on Economic Activity, 2:1996* (Washington, D.C., Brookings Institution, 1996), pp. 135-191; and P. Krugman, "The myth of Asia's miracle", in *Foreign Affairs*, vol. 73, No. 6 (1994), pp. 62-78.

jects wind down. Domestic demand in Taiwan Province of China is forecast to strengthen as monetary policy is relaxed and previously postponed public investment projects are pushed forward.

In some countries that had begun to achieve higher growth only in recent years, economic expansion continued to accelerate (Philippines) or remained at a high level (Viet Nam) in 1996. In India as well, economic growth was at a high level in 1996 after several years of acceleration. Domestic and foreign investment growth in the Philippines was robust, benefiting from a stable macroeconomic environment and the results of liberalization and economic reform. A record inflow of capital boosted liquidity and lowered interest rates while generating a boom in financial services. The strong recovery of agricultural production from the natural calamities of the previous year also boosted output. Viet Nam's economic growth was 9.3 per cent in 1996, maintaining a trend of rapid growth which began in 1992. However, the country faces the challenge of holding inflation and the external deficit to sustainable levels. Strong agricultural and industrial production supported the expansion last year, with particularly robust growth in the still-small non-state manufacturing sector. Export growth was buoyed by oil exports and a record volume of rice exports, made possible by successive good harvests; but with an even higher rate of growth of imports, the external deficit was unsustainably large.

The budget for the 1997 fiscal year has buoyed the economic outlook for India. Although the budget did not put forward a big push in the pace of economic reform, its emphasis on economic growth with social justice and the affirmation of the new Government's support for continued economic liberalization were clear. The proposed policy measures pay special attention to increasing incentives for savings and investment, through reduction of taxes on mass consumer goods and of corporate and personal tax rates, while broadening the tax base. The still-large budget deficit (5 per cent of GDP in 1996) is targeted to be lowered even as social expenditures are increased, based on an anticipated increase in tax revenues from a widened tax base, improved compliance and strong economic growth. New liberalization measures will be implemented in the infrastructure sector to foster domestic and foreign private investment to alleviate existing bottlenecks.

Other major Southern Asian economies have been seeking to improve macroeconomic stability and implement economic reform in order to sustain economic growth. In Pakistan, civil unrest and industrial strikes in response to austere policies to reduce fiscal deficits adversely affected industrial output in 1996. The Government's attempts at reducing the domestic and external deficits had limited effect and inflation remained above 10 per cent. More recently, the newly elected Government indicated its commitment to launching a programme of stabilization and structural reform. Thus, the economic outlook for 1997 remains uncertain. In Bangladesh, strong agricultural production sustained GDP growth of 5 per cent in 1996, while garment exports were depressed by the worldwide slowdown in demand, and private and public investment was weak. In addition, industrial production was disrupted by civil unrest and input shortages.

Gains were made in lowering inflation in a large number of countries in the region in 1996, owing to more moderate growth, aided by improved food supplies. This level of inflation is expected to be maintained overall, although

stronger economic growth and large capital inflows pose risks to inflation in some countries.

China: results of the "soft landing" strategy

China's economy has been achieving the "soft landing" objective of the macroeconomic stabilization policies initiated in 1993. The rate of consumer price inflation, which had reached 24 per cent in 1994, declined to 17 per cent in 1995, and was reduced further to 8.3 per cent in 1996. Meanwhile, the GDP growth rate moderated to 9.7 per cent in 1996, from 10.5 per cent in 1995 and 12.6 per cent in 1994. The high growth of fixed investment, which was the main impetus to rapid growth of demand and rising inflation, was successfully slowed. While investment grew at 18 per cent in 1996, about the same rate as in 1995, this was much lower than the annual average of the period 1991-1995 (about 34 per cent). Consumer spending continued to be strong, with retail sales rising by over 19 per cent.

A persistent tight monetary policy restricting credit was the main instrument employed to restrain growth. It was accompanied by other more direct measures including postponement or cancellation of public investment projects, stricter enforcement of credit ceilings and reinstitution of government control over certain prices. The Government also delayed price decontrols in some areas, which could have resulted in higher prices. This combination of policies succeeded in containing investment growth and alleviating price pressures without seriously dampening consumer demand.

Good harvests also aided the government effort at reducing inflation. Despite floods in large areas of the country, total grain output reached 480 million metric tons in 1996, representing a rise of more than 3 per cent over 1995. This performance was partly in response to a 30 per cent increase in government purchase prices of grains, effective mid-1996, which encouraged greater sown acreage for the fall and winter crops.

Industrial output rose almost 13 per cent on the dynamism of the non-state sector. State-owned industrial enterprises are placing ever heavier financial burdens on the Government. About half of them incurred losses in 1996 and the total amount of losses increased by over 38 per cent. Improving efficiency in this sector remains a priority and, currently, the Government is experimenting with converting them into shareholding companies, and selling their shares in the growing stock market.

The main obstacle to applying market-based rules to medium- and large-sized state enterprises has been the potential rise in unemployment. Survey reports have indicated that managers consider roughly 20 per cent of employees in these enterprises to be redundant labour.[24] Officially registered unemployment in urban areas rose to 3 per cent in 1996. However, if the unemployed among migrant workers in major cities who are not included in official statistics were taken into account, the rate of urban unemployment would be much higher. Decollectivization of agricultural production since 1978 has freed large number of workers from agriculture. An estimated 110 million are estimated to be excess workers out of a rural labour force of 450 million.[25] This has been a source of rural-urban migration and has made urban employment creation an especial concern.

[24] See Youcai Liang, Baoliang Zhu and Shibiao Li, and the State Information Centre, "Project LINK Country Report: China", Project LINK spring meeting, New York, March 1997.

[25] Zhiyong Yang, "What can the Budget Do for Employment?" (in Chinese), *Economic Highlights*, 27 September 1996.

The pace of reform has accelerated in the external and financial sectors. The national currency became freely convertible for all current account transactions as of 1 December 1996. Foreign-funded business was granted equal status and legal rights as national enterprises, while tax and other incentives available only to foreign-invested firms are being phased out. In the financial sector, reforms aim to strengthen the Government's capacity in indirect macroeconomic management. An interbank market for funds was established and the central bank started open-market operations.

Prospects for 1997 are for continued strong economic growth of 10 per cent with a relatively low rate of inflation, although employment concerns remain. The international environment will be conducive to a continued high rate of economic growth in China, with stronger expansion in the economies of China's main trade partners such as Japan and some of the Asian newly industrializing economies. Reforms in currency and foreign investment regulations can also be expected to sustain capital inflows, which included over $42 billion of foreign direct investment in 1996.

Western Asia: the benefits of strong oil prices

Economic output in the Western Asia region strengthened significantly in 1996, reflecting strong growth in the member countries of the Gulf Cooperation Council (GCC)[26], owing primarily to the sharp rise in oil prices. After near-stagnation in 1994, output growth has been accelerating and the region's GDP per capita growth rose in 1996 for the first time since 1992. Economic growth in the region is expected to accelerate to about 6 per cent in 1997, reflecting a strong recovery in economic activity in Iraq. GDP growth in the other fuel-exporting countries will moderate as oil prices ease.

The rate of economic growth will continue to depend to a large extent on international oil prices and oil revenues, the extent of economic reforms, diversification of the economy, and regional economic integration. The private sector is expected to contribute more to economic activity as a result of new policies aimed at encouraging privatization. More accommodative fiscal policy and more robust productivity in the non-oil sector will also contribute to sustaining growth of GDP. Progress in the Middle East peace process would assist economic growth by encouraging the interregional flow of trade and foreign investment, particularly in Israel, in Jordan, and in the West Bank and Gaza.

The rise in oil prices in 1996 helped reduce fiscal and external imbalances and led to a marked improvement in the current account balances of most oil-exporting countries. However, the continued implementation of economic reform and fiscal consolidation in the oil-exporting countries appears to have begun to lose momentum as a result of the large increase in government oil revenues.[27] The increase in oil prices in 1996 provided the fuel-exporting countries with much-needed government revenues to service debt (this was the case for Saudi Arabia and the Islamic Republic of Iran) and ease the consolidation of public spending, while at the same time improving their fiscal imbalances. Improvements in the fiscal balances have also been helped by the reform policies adopted since 1994, for example, in Saudi Arabia and the United Arab Emirates.

In Iraq, the United Nations economic sanctions, in effect since 1990, have exacerbated the country's economic and social problems and impeded regional

26 The members are Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates.

27 Economic and Social Commission For Western Asia, "Survey of economic and social developments in the ESCWA region, 1996-1997: summary", New York, 1997.

trade and financial flows. However, economic growth is expected to improve in 1997 as a result of the implementation of Security Council resolution 986 (1995), in which the Council allowed Iraq to export $2 billion worth of oil every six months.

In the fuel-importing countries, economic activity decelerated slightly in 1996. Growth of economic activity in Jordan, albeit slower, was still occurring at a rate of 5 per cent. Inflation remained low despite a rise in subsidized prices of some essential items, such as bread. Output is expected to grow by 6 per cent in 1997, particularly since Iraq has begun to export oil, thereby producing a situation that is expected to result in trade benefits for Jordan. In Lebanon, GDP growth fell to 3 per cent in 1996, owing mainly to a slowdown in public and private investment earlier in the year. Reconstruction and rehabilitation efforts were disrupted by renewed military conflict in early 1996, but have bounced back since then and 5 per cent GDP growth is expected in 1997.

In Israel, economic growth fell sharply from an average of 6 per cent per annum in 1990-1995 to 3.8 per cent in 1996, owing to a tighter fiscal policy to control inflation and reduce the external deficit, and a slowdown in investment due to concerns over the peace process. The economy is expected to weaken further in 1997, as fiscal and monetary policies remain tight and receipts from tourism low. Such developments are expected to push up the rate of unemployment. The economy in the West Bank and Gaza suffered a drastic slowdown and unemployment soared largely as a result of Israel's closures of the Palestinian territories. Prospects for the economy remain highly dependent on the peace process and on the remittances of the 50,000 Palestinians working in Israel, as well as on foreign financial assistance.

Turkey enjoyed a marked expansion of output for the second consecutive year, following a sharp contraction in 1994 in the aftermath of fiscal and monetary tightening, which saw real interest rates reach 40 per cent. Growth in GDP is estimated to have reached 7 per cent in 1996. The budget deficit had been reduced considerably in 1994 and 1995, mainly through cuts in spending and subsidies and an increase in taxes. However, a recent 50 per cent wage increase for state workers and pensioners has added to the budget deficit, which amounted to about 8 per cent of gross national product (GNP) in 1996. A new economic package presented to the legislature in 1996 focused on raising revenues through the sale of state properties. Economic growth is expected to fall below 5 per cent in 1997, however, reflecting the expectation that little progress will be made to reduce the growing public-sector imbalance, which is contributing to high real interest rates. Inflation, estimated at 78 per cent in 1996, is also expected to slow, but to remain above 50 per cent.

Unemployment concerns in the region

Notwithstanding the marked growth in economic output over the past two years, unemployment remains a key concern throughout the region. High labour-force growth rates, coupled with the slowdown in economic activities — brought about by the decline in oil prices since the mid-1980s — have pushed up unemployment rates in many countries in recent years. Unemployment rates vary widely, ranging from less than 5 per cent in most of the oil-exporting countries to 6.8 per cent in Israel, 13 per cent in Jordan, 25 per cent in Yemen and about 30 per cent in the West Bank and the Gaza Strip. Employment

opportunities have been linked to the economics of oil in the fuel-exporting and some of the fuel-importing countries. Given the dominance of the public sector in job creation in the fuel-exporting countries, tightening of public spending over the past few years and Governments' efforts to reduce payrolls have led to deteriorating employment conditions. Moreover, unemployment difficulties in Jordan and Yemen have been exacerbated by stricter migration policies in most of the GCC countries.

Unemployment of educated nationals has begun to be a concern in the GCC countries, where retrenchment of public employment in the face of a rising number of job applicants has restricted opportunities in the managerial positions usually sought by nationals. As expatriates constitute about 60 per cent of the labour force, a policy option being considered is to reduce the number of foreign workers. Such policies might have limited impact, however, as they would free up employment primarily in lower-skill jobs, which are not the ones typically sought by educated nationals.

III THE INTERNATIONAL ECONOMY

"The open-economy" strategies being followed today by developed, developing and transition economies require an enabling international economic environment, one whose dynamism creates the occasion for faster economic growth and whose liberalism opens more opportunities and closes fewer of them to the entrepreneurial elements in all the countries of the world. Recent and prospective international flows of trade, direct investment and finance suggest that a global dynamism is continuing to build, although the 1996 trade developments were a reminder that the international environment is subject to slowdowns and downturns as well as accelerations and upturns. In addition, the continuing concentration of financial flows on a limited number of countries underlines how the benefits of the liberal model are not being spread broadly enough among countries at different stages of development or economic adjustment.

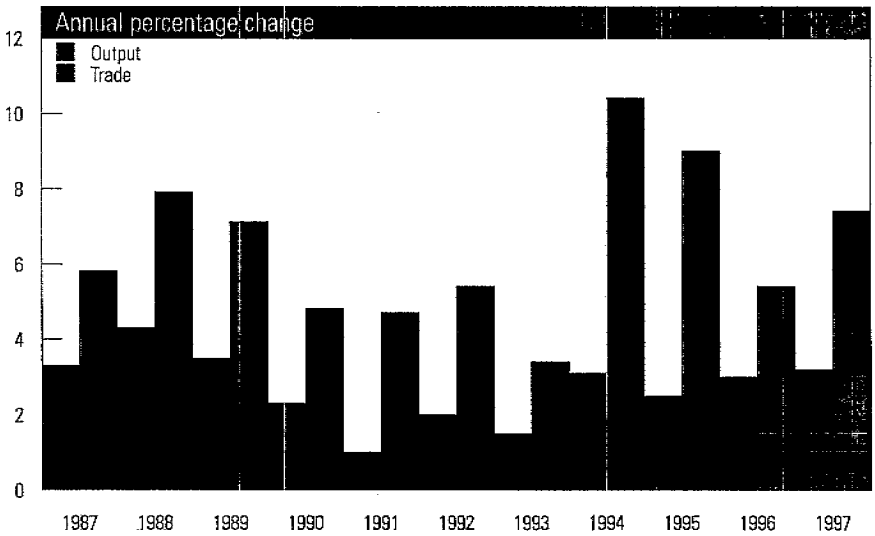
Government policies represent a way to compensate for the uneven workings of market phenomena and a basic reason for the existence of official financial flows. Recent negative trends and policy developments in this area, however, particularly with regard to official development assistance (ODA), have been a cause for concern. Nevertheless, one development has been especially encouraging, a new and more concessional treatment of the debt of several heavily indebted poor countries. It demonstrates that the possibility exists for adopting new assistance measures when the need can be clearly demonstrated and when leadership is resolute. All in all, such developments warrant a more focused consideration by the international community.[1]

BUOYANCY LOST AND REGAINED IN INTERNATIONAL TRADE

After two consecutive years of unusually rapid growth of world trade — when world export volume grew around 10 per cent per annum — the growth of world trade slipped abruptly in 1996 (see table A.19). The volume of global merchandise exports grew only 4.6 per cent in 1996 and all regions of the world shared in the deceleration, albeit to different degrees. However, the growth of world output did not decelerate in 1996 and so the trade slowdown seemed a potentially worrisome anomaly (see figure III.1). It nevertheless appears now that the slowdown was a temporary phenomenon and world export volume is forecast to rise more strongly in 1997, mainly on the strength of stronger import growth in North America and the developing countries.

1 In this regard, the Economic and Social Council decided to raise the level of international political debate on these issues by making them the focus of the high-level segment of its substantive session of 1997, under the heading "Fostering an enabling environment for development: financial flows, including capital flows, investment, trade" (Council decision 1996/310). See also the report of the Secretary-General (E/1997/67) to the Council on this subject; the report sets the stage for that debate.

Figure III.1.
GROWTH OF WORLD OUTPUT AND TRADE,[a] 1987-1997



Source: United Nations (forecast for 1997 based on Project LINK).

a Defined as average growth of exports and imports, as per table A.19.

Changing dynamics of world trade

The dip in world trade expansion in 1996 hit Asia and the Pacific especially hard. Japan among developed market economies and China among developing countries experienced the sharpest slowdowns in the growth rates of export volume. In Eastern and Southern Asia, where international trade has been credited as being the main engine of the region's phenomenal economic expansion, the growth of exports fell below the growth of output. In contrast, Latin America and the Caribbean and Africa saw their export volume slow only slightly (see table A.19). The transition economies of Central and Eastern Europe (CEETEs), however, saw the growth of their exports all but disappear.

Weaker demand in developed countries, whose imports account for about two thirds of world trade (see table A.16), was the primary source of the slower export growth worldwide. The volume of imports of industrialized countries grew by 5.2 per cent in 1996, down from 7.6 per cent in 1995 (see table A.19). The deceleration was sharpest in Japan, where the volume of imports grew only 3.5 per cent in 1996, after having grown by 12.5 per cent in 1995 and 13.6 per cent in 1994. The earlier years of rapid import growth in Japan had been in response to the extreme strengthening of the yen, as demand was quite weak. Indeed, recovery from economic recession in Japan began to gather some momentum only in 1996, the same year that import growth plummeted. A major reason is that the yen also plummeted in 1996, falling almost 14 per cent in real effective terms (see table A.9).

Import growth in Western Europe slowed in 1996. This was a major factor behind the slower growth of exports of the region, since about two thirds of the exports of developed Europe go to other developed European countries.[2] At the same time, Western European exports to the rest of the world grew more strongly, propelled in part by the lowering of the exchange rate of the deutsche mark

2 See United Nations, *Monthly Bulletin of Statistics*, June 1996, special table D.

against the dollar during the year, which assisted Germany and the countries whose exchange rates closely follow the mark. Continued strong import demand in some trading partners was also important, not least in the CEETEs.

By the same token, the CEETEs, among other exporters to Western Europe, also felt the import slowdown of Western Europe. The volume of CEETE exports had grown by almost 20 per cent in 1995, but growth was almost nil in 1996 (see table A.19). Besides the slowdown in their Western European partners, other factors for the CEETEs were at play, including the appreciation of their currencies and the diversion of domestic production from exports to the satisfying of burgeoning domestic demand. In addition, the composition of exports has only partly shifted away from resource-intensive, low-skill and low-technology products for which international demand has been less buoyant.

Although comprehensive data are unavailable on the volume of trade of the member countries of the Commonwealth of Independent States (CIS), indications are that these countries were less affected by the slowdown in Western Europe than the CEETEs. Their trading ties with Western Europe have not been as intensive as those of the CEETEs and they had some success in 1996 in restoring — this time based upon market principles — the formerly strong trading ties that once existed among themselves.[3] Furthermore, the CIS countries rely considerably more heavily on raw material exports than the CEETEs. In particular, primary energy exports continued to account for the bulk of the export revenues of the Russian Federation. In 1996, they accounted for 45 per cent of the total; machinery and equipment exports accounted for less than 10 per cent.

One unusual factor in the slowdown in world trade growth in 1996 — and an indication of how much the world economy has changed — is that developments in a single industry, one that operated on a far smaller scale a decade ago, help to explain changes in the aggregate flow of trade at the global level. Usually, the developments in a single industry are too small to affect the $5 trillion a year of world trade in a significant way. In recent decades, the only comparable single-industry impact was that of international petroleum, which was felt when two highly unusual political episodes engendered the opportunity for extraordinary price increases in the 1970s. Those developments occurred when world trade totalled less than $2 trillion per year and economies were much more vulnerable to the sudden withdrawal of energy supplies than today.

The special industry development in question in 1996 was a temporary sharp drop in world demand for semiconductors and information-technology products. The fact that global production capacity for computer chips had increased sharply in 1995 and 1996, put downward pressure on prices and made it less necessary for large end-users to keep substantial inventories to ensure smooth production runs. These firms reduced their inventories in 1996. Furthermore, the rise in demand for office and telecommunications equipment slowed down in 1996, after a sharp rise in 1995. These phenomena very much affected the exports of several countries in Eastern and Southern Asia, which have become major suppliers to the world market.[4]

Moreover, in the same way that the trade of the Western European economies with each other became very dynamic, especially in specialized subsectors of manufacturing trade, the economies of Eastern and Southern Asia, China and Japan are increasingly becoming major markets for each other's goods (see tables A.15 and A.16). A significant part of that trade is in

3 The Commonwealth of Independent States (CIS) effort to rebuild economic integration on a new basis advanced in March 1997 when a long-delayed summit of the 12 CIS member States was held in Moscow. After reviewing the January 1997 proposal of eight prime ministers for a "Concept for Integrated Economic Development of the CIS", participants referred it back for further study and modification, and for consideration again at the next CIS summit in June 1997. The Concept envisages creation of a single CIS economic space, expansion of the customs union and integration of the transport and energy systems.

4 The burgeoning growth of this sector of trade was highlighted in *World Economic and Social Survey, 1995* (United Nations publication, Sales No. E.95.II.C.1), chap. XI.

electronic goods and components.

This is not to say that there were not also other causes for the regional export slowdown in Asia in 1996. For example, the appreciation of the dollar, to which many of the region's major exporters link their exchange rates, served to make their exports less competitive in the Japanese and European markets. In addition, some major exporters of labour-intensive products have been facing rising production costs and are losing competitiveness to lower-cost producers.

Moreover, other factors of a more localized character were also at work. For example, part of the reason that the volume of exports from China increased by less than 1 per cent in 1996 compared with over 20 per cent in 1995, is that an incentive arose to hurry production and shipment of exports in late 1995 that might otherwise have been registered in early 1996. Part of the cause was a reduction in the rebate on value-added taxes as of late 1995, which prompted enterprises to rush exports so as to take advantage of the higher rebate rate while it lasted. At the same time, a price advantage that had been generated by a large devaluation at the beginning of 1995 had boosted exports in that year, but it was largely eroded by inflation by the end of the year. Thus, exports increased to unsustainable levels in 1995 for a short period, and thus led to much slower export growth in the first half of 1996.

While the dynamic Asian economies thus saw their export growth cut sharply, the slowdown in their import growth was more moderate, in part driven by still-strong investment in many of the economies. Liberalization measures have also served to stimulate import inflows, as was also the case in the region of Latin America and the Caribbean. Other factors operated as well in the latter region, including recovery from recession in Argentina and Mexico and the regional cooperation policy embedded in the Southern Cone Common Market (MERCOSUR) and other regional trading arrangements. Indeed, intra-group exports grew in 1996 at a rate double that of exports to the rest of the world, while their share of Latin America's total trade in 1996 (23 per cent) has become virtually twice what it was in 1991. In addition, Mexico's participation in the North American Free Trade Area (NAFTA) has been a major factor in its recent export success.

Western Asia's import volume bounced back after two years of decline resulting from drastic fiscal adjustment in the wake of lower oil revenues. Regional import volume was estimated to have increased by almost 8 per cent in 1996 and similar growth is expected in 1997.

In Africa, import volume in 1996 continued its substantial growth of recent years, reflecting the acceleration of regional economic growth that began in 1994, and the recent robust growth in investment in such countries as Côte d'Ivoire, Egypt, Kenya, South Africa and Zambia. Export volume grew more rapidly than imports (see table A.19). Favourable growing conditions and reforms that contributed to the recovery of agricultural output in the majority of countries also led to an increase in exports of agricultural commodities. In some countries, non-traditional exports continued to perform well and the importance of these exports continued to increase — yet generally from a small base — in, for example, Botswana, Egypt, Ghana, Kenya, Malawi, Uganda, Zambia and Zimbabwe. These countries thus continued to make progress in diversifying their exports in areas such as manufacturing for regional markets and horticulture for markets in Europe.

Africa's exports continue to be overwhelmingly shipped to developed-econ-

omy markets; for example, the latter took 78 per cent of Africa's exports in 1996, with European countries maintaining their position as Africa's largest trading partners. Trade with the United States of America, however, has been growing rapidly in recent years, although it is concentrated in a small number of countries (Angola, Côte d'Ivoire, Ethiopia, Ghana, Kenya, Nigeria, South Africa and Zimbabwe). This trade may expand more rapidly in the future, as the United States Administration has proposed legislation to the Congress that would lead to establishing a free-trade area between the United States and sub-Saharan Africa in some goods, increased imports of textiles and clothing, and reduced trade barriers on other products.[5]

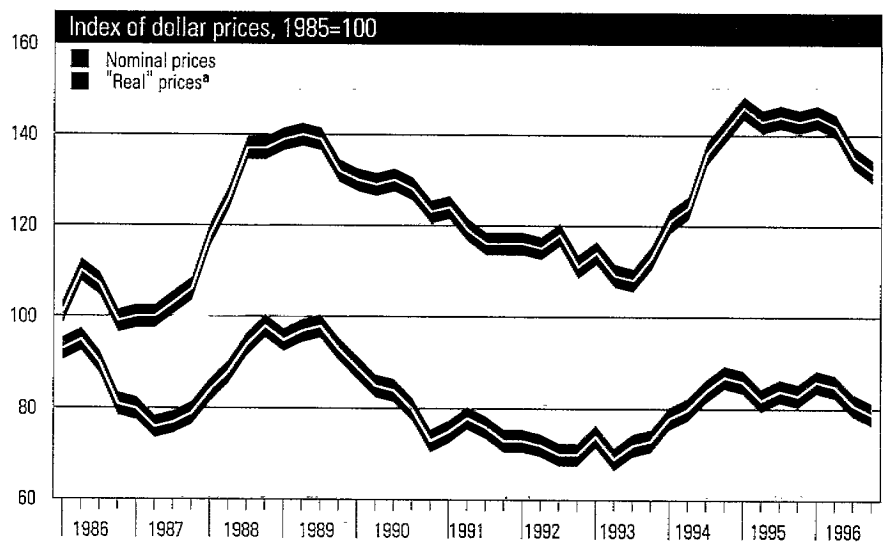
That Africa's exports to Eastern and Southern Asia have grown strongly (increasing from 1.5 per cent of total exports in 1990 to almost 6 per cent in 1996), is largely attributable to the rapid growth of trade between South Africa and several countries in that region. South Africa also accounts for much of the growth of intra-African exports, which rose from 6 per cent of total exports in 1990 to 10 per cent in 1996. In some cases, this trade engenders potential adjustment costs, as imports from South Africa displace local production. Formal trading groups in the region also provided expanded markets for trade among member countries, although trade within each group still represents only a small proportion of total trade.

5 See Office of the United States Trade Representative, *A Comprehensive Trade and Development Policy for Africa: A Report Submitted by the President of the United States to the Congress*, 20 February 1997.

Commodity prices and markets

For several African countries, as for other commodity exporting countries, substantial export volume increases did not translate into comparable gains in 1996 in foreign exchange earnings. The reason was a weakening in prices on international markets, as the commodity price boom of recent years has clearly ended (see figure III.2).

Figure III.2.
NON-FUEL COMMODITY EXPORT PRICES
OF DEVELOPING COUNTRIES, 1986-1996



Source: Data of United Nations Conference on Trade and Development (UNCTAD) and United Nations Statistics Division.

a Nominal prices deflated by unit value of manufactured exports of developed economies.

Lower commodity prices in 1996 could be attributed to increased supplies and weak demand in every major non-fuel category except food. Indeed, food prices, as a group, were the only ones to rise last year (see table A.21). This resulted mainly from large price gains for wheat and grain, especially in the second quarter of 1996. Prices climbed to near-record levels as a result of extensive weather-related damage to the United States winter wheat crop, increased consumption and lower exports in Europe, low levels of global stocks and high worldwide demand. By the fourth quarter of the year, however, production in the five largest grain exporting countries increased by over 20 per cent, following which prices declined steeply for maize (30 per cent) and wheat (9 per cent).

Tropical beverage prices lost considerable ground in 1996, after three consecutive years of increases, as a result of a substantial decline in coffee prices (tea prices increased during the year, while cocoa prices declined only moderately). This reflected large increases in the volume of exports from Brazil and other major producers. The withdrawal of several African countries from the export-retention scheme of the Association of Coffee Producer Countries (ACPC) contributed to excess supplies and the erosion of coffee prices in 1996.

Prices of raw materials — agricultural raw materials such as cotton, natural rubber and lumber, as well as the minerals and metals group of commodities — also fell considerably in 1996, after strong gains in each of the preceding two years. Lower prices generally resulted from high levels of production and exports and lower demand in critical end-use industries such as construction and transportation in the United States and other industrialized countries. Strong import demand in China and countries in Eastern and Southern Asia, however, as in recent years, prevented steeper price declines of many commodities in this group.

Commodity prospects remain mixed and in any case quite uncertain. However, certain developments do not augur well for some commodity exporters, especially the poorest and most vulnerable among them. For example, as a result of Uruguay Round of multilateral trade negotiations reductions of support in agricultural trade (conversion of non-tariff barriers to tariffs and reduction in tariff rates) and new multilateral rules of the World Trade Organization, there has been an erosion of the general and special trade preferences accorded to African, Caribbean and Pacific (ACP) countries associated with the European Union (EU) under the Lomé Convention. The EU has already begun discussion of how it might realign this system of preferences after the expiration of the present Lomé Convention in the year 2000.[6] Moreover, the successful challenge by the United States and several Latin American countries to the EU's banana import regime in 1996 — in which the World Trade Organization upheld the complaint of the United States that the EU's banana import policy unfairly discriminated against United States firms and Latin American producers — might hasten the process of the dismantling of ACP trade preferences and market access privileges. Several high-cost banana producing countries in the Caribbean stand to lose their major source of foreign exchange earnings as a result of the ruling. Together, these factors may well force sharp adjustments on countries that are overwhelmingly dependent on commodities as the principal sources of export revenues. Many of the countries are least developed or island developing countries with limited capacity to adjust if they have to rely only on their own resources.

6 Proposals for discussion were presented by the European Commission in *Green Paper on Relations with the European Union and the ACP Countries on the Eve of the 21st Century: Challenges and Opportunities for a New Partnership*, Brussels, November 1996.

Moreover, while the price declines of 1996 are a reminder that commodity prices typically follow cycles, certain developments in 1996 point to the possibility of increasing market instability and thus increased price volatility in international commodity trade. These relate, in particular, to reforms in the agricultural sectors of developed countries and a growing list of developing countries, which may be expected to subject domestic and international trade in agricultural commodities to more volatile supply and price swings.

In addition, less and less international trade in commodities is being conducted under price-stabilization mechanisms, following the collapse of several international commodity agreements. Only the International Natural Rubber Agreement has survived into 1996 with a buffer-stock arrangement. Even then, the renewed 1995 Agreement entered into force only provisionally in February 1997 (only 73 per cent of major importing countries ratified the Agreement, while ratification by 80 per cent was required for the Agreement to enter into force definitively). Commodity producing countries have in certain cases resorted independently to producer agreements to manage supplies and market prices in attempts to stabilize and bolster export revenues from commodity exports. Such agreements for aluminium, coffee and tin have met with varying degrees of success in recent years, but have proved to be unstable under supply shocks (coffee and tin) or when disagreements emerge among participants about objectives, strategies and the sharing of costs and benefits. Some low-income African countries, for example, withdrew from the ACPC export-retention scheme because they could not afford the accumulated losses in export revenues.

Producers have also attempted to manage price risks through hedging strategies in futures markets. Markets in agricultural and minerals futures contracts are well established in developed countries and certain developing countries, and international trading in commodity-related financial instruments has grown in recent years. New markets for issuing and trading agricultural futures or the addition of financial contracts on new commodities have been introduced in Argentina, Malaysia, South Africa, Zambia and Zimbabwe. In 1989, Hungary launched the Budapest Commodity Exchange, the first such market in the CEETEs.

The long history of futures markets has been mixed. In their normal functioning, they provide an essential service; but abuses of proper business practices appear from time to time and increase price volatility and market uncertainties and can cause huge financial losses. International copper prices, for example, fell by 20 per cent within a one-month period in the third quarter of 1996 after disclosures of substantial losses by the Sumitomo Corporation (a large Japanese trading company) in trades of financial instruments linked to copper. The disclosures revealed attempts to manipulate copper futures prices and prices in the physical market for copper. A main conclusion from this and other recent episodes emphasizes the importance of the extent and quality of market regulation and the need for international cooperation in the supervision of commodity futures markets.[7]

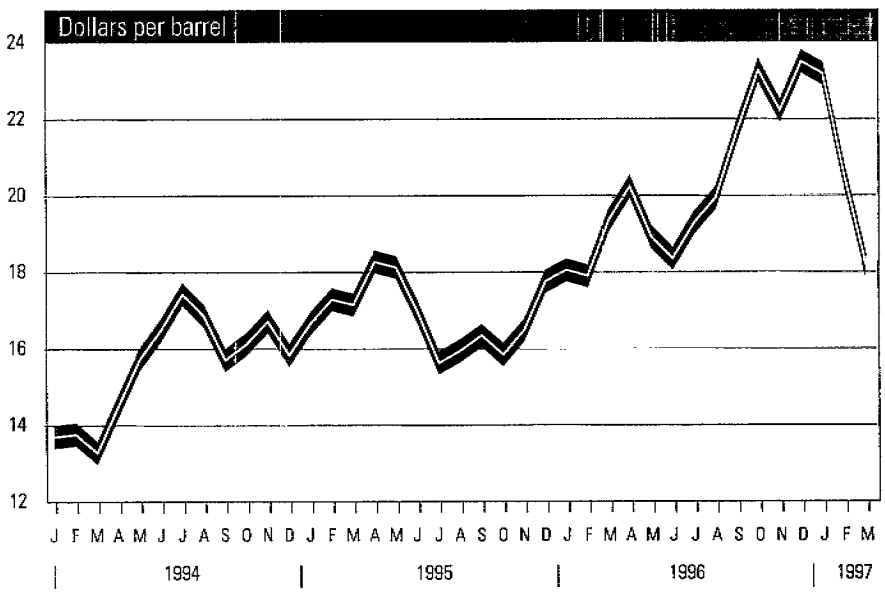
International petroleum market

In 1996, the international oil market was more buoyant than in 1995, and average oil prices over the year rose 20 per cent to about $20 a barrel.[8] As a

[7] Indeed, in March 1997, 20 regulatory bodies in national jurisdictions signed the "Declaration on Cooperation and Supervision of International Futures Exchanges and Clearing Organizations" and 62 international futures exchanges and clearing organizations signed a complementary "Memorandum of Understanding and Agreement" that allows for the sharing of information between jurisdictions on potentially destabilizing market transactions.

[8] The price indicator employed here is the average spot price of the basket of seven crude oils produced by members of the Organization of the Petroleum Exporting Countries (OPEC).

Figure III.3.
AVERAGE SPOT PRICES OF OPEC BASKET OF CRUDE OILS, 1994-1997



Source: Data of the Organization of the Petroleum Exporting Countries (OPEC).

result, oil revenues of the member countries of the Organization of the Petroleum Exporting Countries (OPEC) rose by an estimated $29 billion in 1996, or about 22 per cent over their level in 1995 (see table A.43).

Total OPEC production, including natural gas liquids, rose only marginally. Indeed, OPEC decided in November 1996 to continue to freeze oil production quotas at their aggregate level of 25.03 million barrels per day until June 1997, in line with the desire of the majority of members to maintain reasonable price stability even at the cost of losing market share to non-OPEC producers.[9] In fact, the once-sharp annual declines in production from the successor States of the former Soviet Union levelled off in 1996 and output from the North Sea and non-OPEC developing countries rose significantly (see table A.41).

The strengthening of oil prices in 1996 came to an end in December, when the price averaged $23.50 per barrel; by March 1997 the price had returned to $18 (see figure III.3). The factors that had raised prices during the year had ceased to operate by the new year and the higher output noted above helped ease demand pressures arising from longer-run factors.

The rally in prices during 1996 was in part a response to purchases made to replenish low oil inventories and in part the result of a bunching of purchases that could no longer be delayed in expectation of a weakening of prices once Iraq again began to export oil. Iraq had been barred from exporting oil since the United Nations embargo was imposed before the Gulf war, although the Security Council agreed to allow limited exports for humanitarian reasons under Council resolution 986 (1995).[10] However, by the second half of 1996, Iraqi exports had not yet begun and the timing of Iraq's return to the market appeared highly uncertain. That uncertainty was finally resolved in December 1996, when the "oil for food" formula was accepted.

In 1997, with the continuing flow of oil exports from Iraq and the steady

9 Oil production quotas for all members except Iraq have not changed since 1993.

10 Under the terms of the resolution, Iraq is to be allowed to export $2 billion worth of oil for humanitarian needs every six months, once certain conditions have been satisfied, pertaining, *inter alia*, to the elimination of weapons of mass destruction.

Table III.1.
NET TRANSFER OF FINANCIAL RESOURCES OF GROUPS OF DEVELOPING COUNTRIES, 1986-1996[a]
(Billions of dollars)

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996[b]
Africa	2.3	-3.2	3.7	0.6	-10.4	-5.8	6.4	2.7	8.1	10.5	4.1
of which:											
Sub-Saharan Africa[c]	5.9	6.0	7.6	6.0	8.5	9.2	11.3	9.7	9.3	9.2	6.3
Latin America and the Caribbean	-12.2	-18.4	-21.9	-27.6	-27.4	-9.0	8.6	15.0	17.9	-0.4	-2.2
West Asia	34.3	21.2	23.7	16.6	4.3	50.7	38.4	38.2	9.9	8.3	-0.9
Other Asia	-13.4	-32.1	-20.5	-12.6	-10.4	-9.5	-7.6	3.9	-9.4	4.9	11.3
of which:											
China	7.2	-0.5	3.9	4.9	-10.8	-11.8	-5.2	11.4	-8.0	-12.3	-11.1
Four exporters of manufactures[d]	-22.7	-30.4	-26.8	-22.2	-11.8	-7.8	-8.2	-13.0	-12.2	-7.4	-0.0
All developing countries	11.0	-32.4	-15.0	-22.9	-43.9	26.4	45.7	59.8	26.4	23.2	12.3
of which:											
Net-creditor countries	3.5	-4.0	5.6	0.1	-14.51	8.5	12.9	13.0	-2.3	-12.8	-24.2
Net-debtor countries	7.5	-28.5	-20.6	-23.0	-29.3	7.9	32.8	46.9	28.8	35.9	36.6
Memorandum items											
Sample of 105 countries[e]	4.9	-26.8	-23.5	-20.5	-25.7	6.7	24.6	47.7	28.4	36.0	34.7
of which:											
Least developed countries[f]	8.1	6.7	9.0	8.4	8.8	10.1	11.6	10.5	9.7	12.8	9.8

Source: United Nations, based on data of IMF, official national and other sources (for memorandum items, see table A.27).

a Expenditure basis (negative of balance of payments on goods, services and private transfers, excluding investment income).
b Preliminary estimate.
c Excluding Nigeria and South Africa.
d Hong Kong, Republic of Korea, Singapore and Taiwan Province of China.
e One hundred and five net-debtor countries, for which sufficient data are available. For more detailed information, see table A.27.
f Covering 42 out of the 48 least developed countries.

expansion of output from non-OPEC producers, oil market fundamentals stand to ease still more. A sharp rise in oil output in early 1997 has helped to replenish depleted inventories and the growth in oil demand is expected to be outpaced by the surge in oil supplies over subsequent months. This will lead to a gradual erosion in prices, as a result of which the average price of the OPEC reference basket for 1997 as a whole is not expected to exceed $18 a barrel.

In the medium run, global oil demand is expected to continue growing strongly, particularly in the developing countries of Asia. This will require sustained increases in oil production capacities. A significant part of this increase will come from the Middle East, as well as Venezuela and Algeria and a number of non-OPEC oil-producing countries; but the lack of capital and technology necessary to build new production capacity in line with rising demand has created a new competition to attract foreign oil companies. A number of oil exporters, including Algeria, China, Indonesia, the Islamic Republic of Iran, Malaysia, Nigeria, Venezuela, Viet Nam, Yemen and the successor States of the former Soviet Union are encouraging international oil companies to arrange for investment in the exploration and development of their oil resources.

ABUNDANT SUPPLIES, SELECTIVE USES OF INTERNATIONAL FINANCIAL RESOURCES

The net transfer of financial resources and the net capital flows among groups of countries continued in 1996 to follow the broad pattern that began to be established in 1992.[11] That is to say, the developed economies as a group sent very considerable financial flows to the developing countries as a group, more indeed than was needed to finance imports, with the remainder going into substantial official reserve accumulation. The main development in 1996 was that the total dollar value of the net transfer to developing countries was about $11 billion smaller than in 1995. However, this arose because the net-creditor developing countries virtually doubled the surplus that they transferred abroad, while the transfer to the net-debtor countries was virtually unchanged (see table III.1).[12] The net transfer out of the developed countries was also somewhat smaller in 1996 (see table A.26). The anomalous situation in 1995, when the economies in transition became a net supplier of financial resources to the rest of the world, appears to have been reversed in 1996, owing to sharply increased imports in Central and Eastern Europe (see table A.24).[13]

By all indications, the global pool of international finance continues to grow very rapidly. The total value of international arrangements of medium-term bank loans and bond issues passed the $1 trillion mark in 1996 for the first time (see table A.31). It took less than four years for that figure to be reached from half that amount, truly a remarkable rate of growth.[14] Almost all of these funds are absorbed by developed-country borrowers; however, after developing countries took about $75 billion in new credits each year from 1993 to 1995, their borrowing leaped to almost $120 billion in 1996. By the same token, global flows of direct investment have also burgeoned in recent years and while these funds continue to be mainly placed in developed host countries, many developing countries and some transition economies have attracted large investment inflows.[15] Clearly, whether as credits or investments, funds are available for "bankable" projects and "creditworthy" countries. The concern for the future, however, is in how to mobilize adequate resources for projects that are not privately bankable and for countries that are not yet deemed creditworthy.

Net transfers and financial flows of developed countries

As in previous years, the net transfer from developed to developing countries came despite the large net absorption of financial resources by the economy of the United States. In addition, in 1996, the United Kingdom of Great Britain and Northern Ireland absorbed almost $25 billion in net resource inflows, while Japan provided smaller net financial outflows than in earlier years. The difference was made up by the rest of the developed world and in particular by Germany, whose outward transfer exceeded $25 billion in 1996 (see table A.26).

The net resource transfer to the United States reached $127 billion, after taking into account its net payment abroad of almost $50 billion in dividends and interest (reflecting its net-debtor position). This was the largest net transfer to the United States since 1987 (see table A.26). The net capital inflow of almost $170 billion was driven in particular by surging foreign purchases of

11 In part, the present section was prepared pursuant to General Assembly resolution 51/165.

12 The clustering of countries into "net-debtor" and "net-creditor" groupings is new with the current *Survey* and replaces the "net capital-importing" and "net capital-exporting" groupings of earlier years (for the motivation and explanation of the new groupings, see the introduction to the statistical annex).

13 The coverage of trade and financial data for many transition economies is quite uneven and thus inferences about the magnitude of their net financial transfers and the changes from year to year must be made with great caution. Indeed, there are large margins of error in these data for all economies. This can be seen in the substantial and changing global residuals in trade and current account balances (the net transfer is the financing of the balance of trade in goods and services, while the net capital flow is the financing of the current account balance). In theory, these residuals (the sum of all trade balances and the sum of all current account balances) should be zero — or close to zero — in each year. However, the normal workings of timing asymmetries, exchange-rate changes and related factors are insufficient to account for the size and variation in the residuals that are observed, as in table A.22.

14 Data pertain to gross issues, including new lending to roll over or refinance maturing debts; they include bonds issued by a foreign borrower in one or more markets and large-scale, generally syndicated bank loans, plus bank loans that back up other market facilities.

15 See UNCTAD, *World Investment Report, 1996: Investment, Trade and International Policy Arrangements* (United Nations publication, Sales No. E.96.II.A.14), chap. I.

United States securities in a year in which the dollar exchange rate rose and United States financial markets performed strongly, especially compared with those in Western Europe and Japan. In any event, the increased net financial inflows found a ready use, as the trade deficit of the United States grew by almost $15 billion (see table A.23).

In the past, a substantial part of the net financial transfers to the United States — and to other net capital-importing countries — came from Japan. In 1996, however, the net transfer of financial resources from Japan fell to the lowest level since 1990, when temporarily high petroleum-import costs and slower export growth had limited the size of the trade surplus. In 1996, again Japan's trade surplus was much reduced — indeed it was more than one third lower than in 1995 (see table A.23) — and this reduced on a net basis the funds to be placed abroad.

What is especially striking in the recent Japanese experience, however, is that, in 1996 as in 1995, the net capital outflow of the Japanese economy was less than the net foreign investment by the Bank of Japan, the central bank. The financial flow of the latter represents the increase in official reserve assets (primarily foreign government securities) that were purchased as part of the effort to stem the strengthening of the yen in foreign exchange markets. In all, Japan added over $150 billion to its reserve holdings in the past four years. Over $110 billion was added in 1993-1995, when the nominal effective exchange rate of the yen rose almost 50 per cent. Exchange-rate policy was not as impotent as these data seem to indicate, however, because Japan's inflation rate had become quite low. The real (inflation-adjusted) effective exchange rate rose less than 20 per cent in this period and most of that rise was in the first year. Moreover, in 1996, with continued reserve accumulation, the real effective exchange rate returned almost to the 1992 level (see table A.9).

External financing of transition economies

Based on recorded trade and current account surpluses, the countries of CIS together made net financial transfers to the rest of the world in 1996. The countries of Central and Eastern Europe and the Baltics, on the other hand, drew on foreign finance on a net basis in 1996, as there was widespread deterioration in trade balances. Poland, in particular, shifted from a significant current account surplus in 1995 to a deficit in 1996 (see table A.24).

Whether required to cover trade and current account deficits or not, private financial inflows to most of the transition economies continued to grow in 1996. Flows to some of the CEETEs, in particular, have been quite strong, leading to the build-up of official reserves. Hungary's external position became sufficiently strong for it to repay $4 billion of outstanding debt. More generally, foreign debt burdens are at modest levels, in some cases having declined sharply in recent years (see table A.35). Indeed, only one transition economy, Bulgaria, is currently classified by the World Bank as a heavily indebted country.[15]

Direct investment — attractive as a non-debt creating financial inflow, as well as for being a source of technology and management services — had been virtually non-existent in the transition economies before 1989. In 1996 the net inflow exceeded $11 billion for the second year in a row (it was less than $6 billion in 1994). Total direct investment was even higher in 1995 ($13

[15] See World Bank, *Global Development Finance*, 1997, vol. 1, *Analysis and Summary Tables* (Washington, D.C., World Bank, March 1997), p. 187.

billion), when flows had been stronger to the Czech Republic, Hungary and the Russian Federation. Even so, direct investment in those three countries plus Kazakstan and Poland accounted for over 70 per cent of the total in 25 countries tracked in 1996.[17]

In addition to direct investment inflows, transition economies raised almost $7 billion in medium-term funds on international capital markets, compared with only $2 billion in 1995 (see table A.31). Recent borrowers included Kazakstan, Romania and Slovenia, joined by Croatia in January 1997. The share of borrowing on these markets by sovereign Governments is tending to decline, while that by enterprises and municipalities has been on the rise.

The Russian Federation was also one of the borrowers on international financial markets, when in November 1996 it placed its first $1 billion Eurobond issue, which was oversubscribed. This successful return to the market followed upon efforts over several years to deal with the heavy foreign debt obligations of the Soviet Union, which the Russian Federation had assumed. Thus, after a sequence of temporary arrangements, a final rescheduling agreement with commercial banks had been negotiated through the London Club in November 1995, covering $30.2 billion of debt. It went into effect in September 1996, when the minimum number of individual bank creditors subscribed to the agreement and the Russian Federation made its required partial repayments of interest arrears. In addition, $40.2 billion of debt owed to government creditors, which had been rescheduled annually since 1992 through the Paris Club, was rescheduled in an "exit" arrangement in April 1996, in the largest rescheduling agreement in the history of the Paris Club.[18] That agreement was followed by a series of bilateral implementing agreements that were struck through early 1997. The Russian Federation also agreed with the French Government on the final settlement of remaining tsarist bond claims.

The Russian Federation has also been a major recipient of official financial flows, in particular from the International Monetary Fund (IMF), which approved standby or extended arrangements to assist a dozen transition economies in 1996. Net disbursements by the Fund to all transition economies dropped in 1996, however, by about $1 billion to $3.7 billion, although more funds were committed for disbursement over longer adjustment periods (see table A.30). In addition, lending commitments by the European Bank for Reconstruction and Development (EBRD) fell more than $400 million in 1996 compared with 1995, although they still totalled over $2.8 billion (see table A.34).

Net financial transfers and flows to developing countries

The basic dimensions and the basic dilemma of the net transfer of financial resources to the developing countries continued for another year in 1996. Those countries that can tap international capital markets for a wide variety of projects and that successfully host direct investment continued to see substantial inflows of funds, often including large-scale portfolio flows. Together these totalled more financing than was employed in expanded capital formation, which led to substantial reserve accumulation and unwanted pressure for appreciation of local exchange rates in several countries. Even so, the expansion of foreign borrowing has not been so rapid as to significantly raise either debt-to-export or debt-to-gross domestic product (GDP) ratios in any of the

17 See European Bank for Reconstruction and Development (EBRD), *Transition Report Update* (London, EBRD, April 1997), p. 12.

18 The agreement marked the first occasion since the 1991 arrangements for Egypt and Poland in which the debt servicing on the full stock of covered debt of a middle-income country was treated in one agreement, instead of annually; there are several stages in the arrangement, however, before the April 1999 restructuring of the outstanding debt stock and creditors may terminate their participation if the Russian Federation does not maintain its 1996-1998 extended adjustment programme with IMF (see World Bank, *Global Development Finance, 1997...*, p. 70).

major groups of developing countries. Indeed, in the regions where the ratios had been high (Africa and Latin America), they were at about the same level in 1996 as in 1995 or they fell, while in Asia, the region with the lowest debt burden indicators, the external debt-to-exports ratio rose slightly (see table A.37).[19]

The concentration of private flows on a limited number of recipients remains very high: 10 countries accounted for 77 per cent of the total flow to developing countries in 1996.[20] Other countries perforce rely mainly on official, especially concessional sources of external financing and they continued to face an increasingly limited supply of funds in 1996. Perhaps the most positive prospect that can be held out to policy makers in some of the poorest and most heavily indebted countries is that their international cash flow difficulties are likely to be increasingly alleviated by greater debt relief, as is noted below, if not greater aid flows.

The net-debtor developing countries taken together came to hold $465 billion in official reserve assets at the end of 1996, a value equivalent to almost four months of imports of goods, services and investment income payments (see table A.28). For a sample of 105 of these countries, the net transfer from all financial sources, after net payment of interest and dividends, totalled $87 billion, of which $35 billion was used to pay for goods and services imports — the "net transfer" in table III.1 — and the rest, $52 billion, was added to reserves (see table A.27).

At this level of aggregation, resource flows through major categories of private financing have clearly been plentiful. For example, despite net payment of dividends and other profit remittances, the sample of developing countries received a net transfer associated with direct foreign investment of over $40 billion in 1996. The actual net investment flow for this sample of countries was almost $68 billion, more than twice the level of 1992 (see table A.27).

The resource concentration of private flows as a whole, mentioned above, is reflected in each of the component flows, not least in direct investment. Thus, Southern and Eastern Asia received two thirds of the total direct investment flow to developing countries in 1996, with China alone accounting for about 44 per cent,[21] reflecting continued liberalization of foreign investment treatment in China and sustained and rapid economic growth. Elsewhere in the region, investment in member countries of the Association of South-East Asian Nations (ASEAN) continued to be strong and to benefit from the restructuring of production in the region and Japan. Indeed, economies of the region have become sources of direct investment as well, with Hong Kong, the Republic of Korea, Singapore and Taiwan Province of China serving as the major sources. China, Malaysia and Thailand are also emerging as investors. The major destinations of their investment are developed economies, but there is also increasing investment in Africa and Latin America.

Direct investment in the region of Latin America and the Caribbean also continued to strengthen, accounting for more than a quarter of the total in 1996. One of the stronger factors attracting foreign investment in this case has been privatization. Prospects for significant privatization exercises in the banking, energy, mining and telecommunications sectors in several countries, including Bolivia, Brazil, Colombia, El Salvador, Guatemala, Mexico and Venezuela, will continue to attract substantial foreign direct investment in the foreseeable future.

Africa, in marked contrast, accounted for less than 5 per cent of direct invest-

19 This notwithstanding, countries that were in difficult debt situations in 1995 were in essentially the same situation in 1996; nevertheless, debt and debt-service reduction agreements were reached for Panama and Peru during the year (see table A.39) and the international initiative for treating the debt of a group of heavily indebted poor countries advanced towards implementation (see below).

20 This corresponds to a commonly cited World Bank statistic that the top dozen destinations of private flows took 72.5 per cent of total flows in 1996; the difference between this and the text statistic lies in the inclusion of the transition economies in the developing economies grouping by the Bank and thus the inclusion of the Russian Federation and Hungary among the top 12 recipients (see World Bank, *Global Development Finance, 1997...*, p. 7).

21 Based on estimates provided by the World Bank.

ment in the developing countries in 1996. Indeed, owing to the dividend and other profit payments on existing investments in Africa, the net transfer from direct investment in the net-debtor countries of Africa was a net cash outflow of about $1 billion last year (see table A.27). Foreign direct investment remained concentrated in the mining sector (particularly in energy) and in only a few countries. Although most investment originated in developed economies, there has also been some investment from developing Asia, in particular from Malaysia and the Republic of Korea. In addition, foreign direct investment is increasing from other African countries, in particular from Ghana and South Africa.

Perhaps as a sign of the future, there have also recently been some important foreign direct investments in African manufacturing, for example, in electronics in Morocco, in car assembly in Botswana, Egypt and South Africa, and in textiles in Madagascar, and new measures to encourage foreign investments were announced in 1996, inter alia, in Egypt, South Africa and Tunisia. Also, acceleration of privatization programmes in some African countries may provide additional occasions for enhanced direct investment inflows.

The growth in amount and distribution of medium-term lending to the developing countries roughly follows the pattern for direct investment. Thus, owing to the overall surge in flows, the sample of 105 net-debtor developing countries were able to pay over $42 billion in interest on bonds and medium-term bank loans in 1996 and still retain a net transfer on this type of financing of over $42 billion. The almost $85 billion in net lending from these sources in 1996 more than doubled the level of 1994 (see table A.27). Again, Asia and Latin America accounted for almost all of the funds raised on capital markets, and about 80 per cent of the funds that went to Africa were absorbed by South Africa.

The picture could not be more different for official flows. Official grants have remained virtually unchanged since 1994, about $10 billion a year.[22] Official lending in 1996 dropped to zero, net of repayments, although this needs to be read in conjunction with the surge in this form of lending in 1995 (see table A.27). In other words, the 1995 figure includes large loans to Mexico by the United States ($12.5 billion), IMF ($17.8 billion) and other official creditors in the context of Mexico's balance-of-payments crisis, some of which were repaid in advance in 1996, after Mexico regained access to private financial markets and could again float bond issues. Thus, the net flow of official lending shown in table A.27 was unusually large in 1995 and unusually small in 1996.

However, even without the Mexican developments, the flows of official credits have been largely static. Partly, this is a "demand-driven" phenomenon, as several Governments, in Asia in particular, can raise funds on private markets on more favourable terms than are available from multilateral development banks (the loans in question are from non-concessional lending programmes). In addition, developing countries made net repayments to IMF in 1996 of $3 billion, as the 1995 borrowing surge associated with the Mexican crisis and its aftermath ended; and while IMF initiated 20 new adjustment financing programmes in 1996, they were generally smaller operations (although Argentina and Venezuela were significant borrowers), entailing total commitments of only $5.2 billion (see table A.29). In this regard, the fact that larger demands are not being made on fund resources at this time can be applauded as a sign of an easing of adjustment pressures on at least some developing countries.[23]

In addition, however, two factors have been operating on the "supply side"

22 Private grants, which partly reflect non-governmental organization funds for humanitarian emergencies, have declined in each of the past two years and were less than $7 billion in 1996.

23 This notwithstanding, IMF liquidity was affected by the large drawings that were made recently by Mexico and the Russian Federation, among others. The Fund's liquidity ratio has since recovered, but the rapid and successful conclusion of the Eleventh General Review of Quotas would arm the Fund with the resources to meet the demand for its assistance in the next international crisis. In a related matter, the approval by the IMF Executive Board of the New Arrangements to Borrow in January 1997 will give the Fund potential access to an additional $24 billion in borrowed funds (above the $24 billion currently available in the General Arrangements to Borrow), should the need arise. These resources, however, are only for broad crisis situations and do not substitute for adequate provision of the IMF's own funds through its pending Quota increase.

to slow official lending. One factor has been an effort in the multilateral development institutions — lending institutions and operational agencies of the United Nations — to improve the quality of projects and programmes and to streamline operations, as a response to critical internal operations assessments.[24] This has caused a rethinking of some proposals and has slowed disbursements of planned flows in some cases.

The second factor is the more limited availability of supplies of resources, especially the concessional grants and loans that make up ODA, to commit to development financing. Far from approaching the United Nations target of ODA flows equivalent to 0.7 per cent of donor country gross national product (GNP), the average of the developed donor country aid "effort" dropped to 0.27 per cent of GNP in 1995 and a further decline is possible in 1996 and 1997.[25] Four countries (Denmark, the Netherlands, Norway and Sweden), the same ones that do so each year, exceeded the United Nations aid target in 1995, while the country that had been traditionally the largest donor, the United States, contributed aid equivalent to only 0.10 per cent of GNP and dropped to fourth place (behind Japan, France and Germany) in the total dollar value of flows (see table A.32).

This impacts especially hard on Africa, which has received about 45 per cent of total ODA flows in recent years (see table A.33). It is, indeed, the region with the least access to other forms of financing, as noted above, and is thus the region most dependent on the continuation of such aid flows.

INTERNATIONAL COOPERATION FOR DEVELOPMENT

The decline in total flows of ODA in 1995 and the concern that this was the beginning of a longer-run negative trend has brought into dramatic relief a development that had been growing under the surface for several years. Of all the international trade and financial issues before the international community, this one lies closest to the heart of the "North-South dialogue" at the United Nations and the international commitment to promote development. It thus warrants a special focus here.

The essence of the problem is that with the end of the cold war and with a reduced role for the State in economic affairs being widely seen (see chap. V), the motivations for continued large ODA commitments have been reassessed in some donor countries. To a degree, improved efficiency and clearer goals for ODA should help rebuild donor support and indeed international work in this area has grown appreciably in recent years. Ultimately, however, political leadership will determine whether or not ODA has a future, in the same way that strong leadership has been required to turn the "HIPC Debt Initiative" (see below) into reality.

More impact from each aid dollar

When much of the intellectual work on ODA was undertaken in the 1960s, it was mainly seen as financial and technical assistance in order to fill gaps between the resources available and those needed to reach planned rates of economic growth. Financial markets were not open to developing countries and the Marshall Plan experience in post-war reconstruction was still fresh in the minds of all. The central project for development was to shorten the period

24 See, for example, the discussion of recent World Bank experience in its *Annual Report*, 1996 (Washington, D.C., World Bank, 1996), pp. 28-35.

25 Preliminary estimates of annual ODA flows by the member countries of the Development Assistance Committee (DAC) of the Organisation for Economic Cooperation and Development (OECD) in one year are traditionally released in June of the following year.

needed for poorer countries to catch up with the richer ones.

For some time, this model has not fit what donors were seeking to accomplish through ODA. Attempts to redefine ODA and donor goals have been made over the years in various forums and discussion continues in the community of policy scholars.[26] Over the past few years, the Development Assistance Committee (DAC) of the Organisation for Economic Cooperation and Development (OECD) has undertaken a major review of ODA in a series of reports and consensus statements. This effort culminated in the adoption at the Thirty-fourth High-Level Meeting of DAC of a new statement of goals that is intended to guide the future development of ODA of DAC member countries.[27] The goals are mainly social and environmental, with a fundamental focus on poverty alleviation. They are also very precise, with targets to be met by the year 2005 or 2015, largely drawn from the series of international conferences held under United Nations auspices between 1990 and 1996. The targets provide the aid community with new guideposts against which to measure aid programmes and for use in arguing for larger aid appropriations in legislatures. In short, they "clarify the vision of a higher quality of life for all people", attainment of this higher quality of life being the main aim of aid programmes.[28]

By the same token, the multilateral development institutions have been making a deep re-examination of their operational strategies, whose short-term consequence in slowing down resource disbursements was noted above.[29] The outcome of the exercise can entail a new strategy for programme lending or a new set of project evaluation criteria (for example, regarding social and environmental impacts) and an internal reorganization. In the case of the World Bank in particular, concern about such issues has led to the concept of a "strategic compact", which aims to make the Bank "more cost-effective, participatory, flexible, and responsive to client needs", as the Development Committee noted when it endorsed the concept at its April 1997 meeting.[30]

Change in the governance of an institution itself may be part of new reforms. This was the case at the International Fund for Agricultural Development (IFAD), for example, which in November 1996 agreed to several changes as part of the fourth replenishment of its resources. One change is in governing structure: the original rigid three-category system of membership (OECD, OPEC and developing-country members) is being changed into a more flexible system in which member countries will have two types of votes, namely equal membership votes and votes based on the size of their contribution to IFAD.

In addition to making service provision more effective, multilateral institutions have also sought to overcome disappointing financial commitments by some donor Governments. One approach has been to bolster lending authority by more than new donor contributions themselves would allow by redirecting some of the profits of the non-concessional part of the institution into the concessional lending affiliate. This was employed, in particular, in March 1996 in the eleventh replenishment of the International Development Association (IDA), the concessional lending arm of the World Bank.[31]

A similar arrangement was struck in Tokyo in January 1997 for the Seventh Replenishment of the Asian Development Fund (ADF-VII), the soft-loan arm of the Asian Development Bank. Donors agreed to a $6.3 billion replenishment for the period 1997-2000. Only $2.6 billion of this amount will comprise new contributions (a far-lower new resource share than before). The rest of the

26 For a discussion on rethinking the future of aid in its historical context, see Roger Riddell, "Aid in the 21st century", Discussion Paper Series, No. 6, Office of Development Studies, United Nations Development Programme, 1996.

27 See, Development Assistance Committee, *Shaping the 21st Century: The Contribution of Development Co-operation* (Paris, OECD, May 1996).

28 Ibid., p. 9.

29 They have also been the focus of major independent studies, such as the five-volume series by the North-South Institute in Ottawa (E. Philip English and Harris M. Mule, *The African Development Bank* (vol. 1), Nihal Kappagoda, *The Asian Development Bank* (vol. 2), Chandra Hardy, *The Caribbean Development Bank* (vol. 3), Diana Tussie, *The Inter-American Development Bank* (vol. 4) and Roy Culpeper, *Titans or Behemoths?* (vol. 5) (Ottawa, The North South Institute, and Boulder, Colorado, Lynne Rienner Publishers, 1996 and 1997).

30 See paragraph 13 of the communiqué of the Joint Ministerial Committee of the Boards of Governors of the Bank and the Fund on the Transfer of Real Resources to Developing Countries (Development Committee), Washington, D.C., 29 April 1997, in *IMF Survey*, 12 May 1997, p. 140.

31 See *World Economic and Social Survey, 1996* (United Nations publication, Sales No. E.96.II.C.1 and Corr. 1), chap. III, subsect. entitled "International financial cooperation in a lean period".

funds are to come from repayments of past loans, interest income and profit transfers from the Bank's non-concessional operations. Also noteworthy, about half of the donated funds for ADF-VII are to come from within the Asian region. Thus, Malaysia and Thailand will make their first contributions to ADF, as will Indonesia, a current ADF borrower.

Strengthened cooperation: the HIPC Debt Initiative

One common aspect of recent multilateral and ODA reform efforts is the difficulty that Governments have had in reaching a workable consensus, as reflected by the need noted above for alternative funding arrangements to compensate for the low level of financial commitments that the donors as a group were able to make. In this regard, the World Bank and IMF debt-relief initiative for a group of "heavily indebted poor countries" (HIPCs) is interesting, as it requires unusual creditor coordination in order to grant unprecedented amounts of relief.

The countries in question, numbering 41 on the basis of a preliminary assessment by IMF and the World Bank, have accumulated substantial debts to official creditors while their debt-carrying capacity was being deeply eroded by differing combinations of international and domestic economic disappointments. Long after the heavily indebted middle-income countries were obtaining massive restructurings of the debt owed to international commercial banks, creditor Governments and multilateral institutions were expanding their lending to poor countries and rescheduling debt-service payments with only limited degrees of concessionality. The sense of realism about the effective insolvency of Governments that the markets had been imposing on bank creditors of middle-income countries was not shared by official lenders to poor countries.[32]

By the time the new President of the World Bank took office, it was increasingly clear that a number of poor countries were likely to remain effectively insolvent even after they had completed strong adjustment measures and after having factored in both the most concessional debt-restructuring terms available and prospective receipts of ODA. As a result, the President of the Bank, jointly with the Managing Director of IMF, developed the HIPC Debt Initiative, which the Interim and Development Committees endorsed in their fall 1996 meetings.[33]

The programme for HIPC countries, which began to be implemented this year, entails a number of stages and decision points.[34] First, an eligible country must establish a three-year "track record" of policy performance, during which time it may benefit from a two-thirds reduction of its debt-service obligations to Paris Club creditors and receive additional concessional assistance from multilateral and bilateral sources. Second, once the track record is established, if it is decided that deeper debt reduction than is otherwise available is required, application is made to the Executive Boards of the Fund and the Bank for support under the HIPC initiative. Approval starts the second stage, under which the Paris Club creditors are to provide up to 80 per cent reduction of debt servicing, other creditors are to provide comparable treatment, donors and multilateral institutions provide enhanced support and the country establishes a second three-year track record. Countries can receive credit for past adjustment policy performance and so the six-year HIPC process can be shortened. In any event, when the completion point is reached, the stock of debt is reduced, including up to 80 per cent of Paris Club debt, and appropriate and

32 The anomalous treatment of official debt owed by poor countries and the unwillingness to consider treatment of debt owed to multilateral institutions was increasingly recognized in the early 1990s (see, for example, the report of the Secretary-General (A/47/396) to the General Assembly on recent experience under the international debt strategy (under the agenda item entitled "External debt crisis and development"), paras. 61-80).

33 See the communiqués of the Interim and Development Committees of 29 September 1996 and 30 September 1996, respectively, in *IMF Survey*, 14 October 1996, pp. 325-329.

34 See *World Bank, Global Development Finance, 1997...*, pp. 44-46.

comparable measures are taken by all other creditors.

Official creditors thus have structured the granting of deep debt relief as a reward for completing prescribed policy reforms. However, the fact that the HIPC programme acknowledges that undertaking the reforms without receiving HIPC relief would leave the country in an untenable situation means that it has also made it imperative that the HIPC programme actually deliver the promised debt relief. If it could not do so, other potential HIPC countries would be effectively told that after six years of following the strong adjustment urged by the international community, they might still be in an untenable situation. It might have been simpler just to acknowledge the effective insolvency of the countries as sufficient reason to give up creditor claims (as in conventional bankruptcy). Now, however, it is absolutely essential that the Bank and Fund mobilize all creditors to deliver on the promised debt relief.

One country advanced to the HIPC decision point in the early months of 1997 and the reaction to the decision has been heated. Uganda, the country concerned, was promised a HIPC debt stock reduction and associated relief from multilateral debt, but not until 1998. As Uganda has been "on track" since 1987, it could well have been assumed by Uganda and others that the second three-year waiting period would be fully waived. The interim cash-flow problem until the completion date could in any case be handled with additional assistance, to which the World Bank would contribute. However, the expectations in potential HIPC countries had been raised high and the 1998 completion date was seen as a disappointing delay, rather than as a partial victory for crediting past behaviour. The capacity of the international system to actually deliver the promised relief was thus left unclear.

In fact, the HIPC process was still on track; and since the objective of the exercise is removal of the debt overhang, the exact timing of the completion date is less important than having one, especially if equivalent cash-flow support is accorded for the interim period. The commitment made at the decision point is irrevocable (assuming continued satisfactory country performance). However, appropriate timing of HIPC benefits is important for political reasons — reasons connected with raising its credibility in the eyes of its potential beneficiaries. Certainly, it is essential that the coordinated package of relief measures be delivered at the completion point. With strong leadership, the HIPC initiative can bring down the curtain on the debt crisis of the 1980s before the end of the 1990s.

PART TWO

A PERSPECTIVE ON FISCAL ADJUSTMENT

IV THE PRACTICE OF FISCAL REFORM

Governments everywhere are examining the nature and extent of their activities, especially in the economic and social spheres. The present part of the *Survey* examines some experiences in these areas in the 1990s.

The analysis is based in part on a review of fiscal reform in 14 countries.[1] The countries were selected because of their different general economic situations, fiscal positions, levels of development, political circumstances and geographical locations. As such, they were viewed as reflecting the range of different circumstances that countries might face when embarking on and implementing fiscal reform; the diverse experiences of these countries in turn determined the selection of issues addressed in chapters V, VI and VII below.[2] The country reviews were supplemented by materials synthesized from the academic and policy literature, including the work of a United Nations high-level group of experts on development strategy and management of the market economy.[3]

Continuing a practice of recent editions of the *World Economic and Social Survey*, this part includes an examination of the meaning and robustness of the data that must underlay the analysis required for policy formulation. As will be seen in chapter V, properly identifying the main objects of analysis in fiscal policy raises many questions of a definitional and empirical nature. As a reflection of this, collaborative work on these matters continues to be undertaken by international agencies, especially in the International Monetary Fund (IMF), where the *Manual on Government Finance Statistics* is currently under revision, and in the Statistics Division of the United Nations Secretariat.

THE POLITICAL ESSENCE

In many instances, the debate about the role of the State in the economy has been driven by concern that government expenditure was exceeding government revenue, sometimes by a substantial amount. As a result, the stock of government debt in many countries has grown appreciably, and sometimes rapidly, during recent decades, and become increasingly large in relation to gross domestic product (GDP). The ratio of government debt to GDP cannot continue to increase indefinitely. At some point, a Government is likely to become unable to cover its deficit by issuing new debt on reasonable terms. This might make it impossible to resist resorting to the undesirable course of

1 The countries were Argentina, China, Ethiopia, Ghana, Hungary, Ireland, Japan, Jordan, Kazakstan, New Zealand, Nicaragua, the Philippines, the Russian Federation and the United States of America.

2 An explicit methodological choice was made in pursuing the analysis through a review of selected country experiences instead of, say, a large-scale cross-country analysis. The approach adopted here was to search for what was most interesting in a range of country experiences, with the expectation that there might be factors that were *sui generis*.

3 See Edmond Malinvaud and others, *Development Strategy and Management of the Market Economy*, vol. I, and vol. II, István P. Székely and Richard Sabot, eds. (Oxford, United Kingdom, Clarendon Press, 1997).

financing deficits through money creation, that is to say, through the "inflation tax". Alternatively, the volume of debt might reach a level requiring taxation of such magnitude as would either deter private initiative or be unacceptable to the populace. Especially, but not exclusively, in countries whose debt is partially held by foreigners, another increasingly important reason for this inability to continue running a sizeable fiscal deficit is that present-day globalized and sophisticated financial markets impose heavy costs on any country that has government deficits judged by these markets to be excessive.[4]

In order to avoid such outcomes, an effort has to be made to reduce the deficit by combinations of increasing government revenues and reducing government expenditures. In recent practice, however, the predominant response to such a predicament has been to place greater emphasis on reducing expenditures than on raising revenues. To some extent, this reflects the fear expressed above, namely that the level of taxation is perceived to already be approaching, or to have reached, its maximum acceptable level. However, this situation applies mainly to developed countries where tax revenue as a share of GDP is generally higher than in developing countries and economies in transition. While hostility towards higher taxes may be a reason to focus on reducing government expenditures in developed countries, it should be less of an impediment to increasing tax revenue in developing and transition economies. As illustrated in the following chapters, fiscal consolidation in such countries can be a more balanced mix of revenue enhancement and expenditure reduction.

However, even in countries where taxation is relatively low, the recent emphasis has often been on reducing government expenditure rather than on raising revenue. This is because the reputation of the State as an effective actor in the economic and social arena has been tarnished. There is a strong belief in many countries, both in political and economic circles and among the voting public, that the State should do less in this area, or at least that the role of government needs to be re-examined. It is widely felt that Governments should divest themselves of some of the economic and social responsibilities that they have accumulated over the years, either because those responsibilities are not appropriate ones for Governments to bear or because Governments are not proficient in discharging them.

Nevertheless, there remain several economic and social functions that only the State can perform and a number of additional functions that the State should perform or is better placed than other entities to perform. The State has to meet some social responsibilities, primarily those towards members of society encountering undue hardship; it is also generally recognized that the State should ensure the provision of the basic health and education programmes that serve as a foundation for development. With changing economic and social circumstances, the nature and scope of these rightful responsibilities of the State are themselves likely to change. It is therefore important to examine what additional responsibilities it may be necessary for a Government to undertake, as well as those that it might abandon. It may be as important for Governments to change the nature of their expenditures as to reduce their size.[5]

The efforts to reduce government deficits and to define the appropriate responsibilities of the State are closely intertwined. The debates about the need to reduce fiscal deficits tend to be couched in terms of financial and economic considerations of a technical nature, such as the consequences of a

[4] In the words of the chief foreign affairs columnist of *The New York Times*: "Those countries that get their politics and economics right are rewarded by the (financial) supermarkets (of Wall Street, Tokyo, Singapore,...) with investment capital to grow and those that don't are left as road kill on the global highway" (Thomas L. Friedman, *The New York Times*, 10 November 1996).

[5] This is recognized in the Declaration adopted by the Interim Committee of the Board of Governors of IMF on 29 September 1996 which states that one objective should be to improve "the quality and composition of fiscal adjustment, by reducing unproductive spending while ensuring adequate basic investment in infrastructure" (see *IMF Survey*, 14 October 1996, p. 327.) The paragraph goes on to include expenditures "to alleviate poverty and provide well-targeted and affordable social safety nets".

deficit for macroeconomic stability, the possibility of financing a large government debt and the economic efficiency of various government activities. While technical factors set limits to the appropriate and sustainable operations of government in a market economy, they leave a vast amount of room for public choice about what Governments should do. The issue of fiscal reform thus goes well beyond the technical dimensions of policy design: it is about the core operations of government and it is central to the nation itself. Discussions about the role of government in the economic and social life of a country are ideological and political in nature, even though they include considerations of whether government has an inherent economic advantage in undertaking particular functions.[6] The political dimension can have a profound effect on the success of the technical decisions that are taken.

One reason why fiscal policy has an important political dimension is that government revenue is not used only to provide services: it also shifts resources from one segment of society to another, directly or indirectly, intentionally or unintentionally. Adjusting government expenditure or revenue entails a transfer of income and benefits between generations, social classes or income groups. Government investment expenditure, such as on roads and other infrastructure, benefits future as well as present generations. Similarly, government education expenditures benefit current young recipients and future society at large — both groups at the cost of present-day taxpayers. Taxes to pay for pensions and care for the elderly similarly embody a shift of resources between generations and segments of society. Taxes can also provide revenues to pay incomes to the indigent. Such decisions are political at their core, as was recognized by the Interim Committee of the Board of Governors of IMF in April 1996, when it stated: "Greater transparency of fiscal operations and awareness of the implications of longer-term commitments are needed to build public consensus and support for determined policies to deal with these problems".[7]

In order to be able to fulfil its functions in a democratic society, a Government needs a sense of legitimacy in the eyes of the governed. This legitimacy grows in part out of public support for the services provided by the State and for the transfers that it is effecting. There have been several instances in the 1980s and 1990s where respect for the State was seriously eroded. Such situations make it difficult for a new government, however innovative or different its policies, to re-establish authority, in particular to mobilize the tax revenue necessary to fulfil its redefined functions. The necessary new political consensus itself requires both the promise and the delivery of the benefits of reform.

Much of the difficulty with fiscal reform in the transition economies stems from the fact that the previous legitimacy of the State has been eroded and its new role is not fully understood. The transition has involved a shift from a system in which the State was the economy and was responsible for most aspects of daily life to one in which the government is a separate and limited institution in a broader market system. However, among the plurality of economic and social agents, the government is the only institution generally presumed to be subject to detailed public control. Part of the challenge in these economies lies in developing public understanding that the government in a market economy cannot do everything (as it did under central planning) and that it has to pay for what it does do.

Much of the development of representative political institutions has come

6 Recent years have seen extensive discussion of so-called "government failure", in addition to market failure, and of whether the government is more efficient and effective than either private enterprise or voluntary organizations in performing some of its traditionally accepted functions.

7 Communiqué of the Interim Committee of the Board of Governors of IMF, 22 April 1996, para. 4 (see *IMF Survey*, 6 May 1996, p. 148).

from the effort to ensure greater public control over the content of government spending and over the exercise of the power to tax. All such decisions go to the heart of the political process: rates of tax are necessarily set by law and many of the obligations that government has to finance (such as state pensions, the provision of universal free public education up to a certain age and those arising from the commitment to provide a social safety net) are also set by law.

SOME KEY CONSIDERATIONS IN DESIGN AND IMPLEMENTATION

As in most aspects of economic and social policy, there can be no unique or universal approach to fiscal reform — there is much more, in other words, to the implementation of effective fiscal policy than can be covered by any general set of principles. The appropriate policy measures require pragmatic choices that are based on the economic, social and political situation in each country. Equally importantly, fiscal reform entails a large measure of learning by doing and the subject remains under review by both analysts and practitioners. Even in the past few years, it is possible to identify a shift in views regarding the role and functions of government. Nevertheless, the following three chapters give rise to a number of observations that should be taken into consideration in formulating a strategy for fiscal reform.

A first observation is that the implementation of fiscal reform sometimes warrants the setting aside of a considerable period of time. Too sharp a fiscal contraction can be self-defeating if it lowers national output, and thus tax revenues, while raising expenditures for unemployment compensation. Also, too rapid a correction might impose undue hardship on segments of the population and might therefore become politically unsustainable. However, too slow a rate of deficit reduction might not build sufficient confidence in the government's commitment to sound budget principles. The appropriate speed of budget correction is a variable that needs to be addressed on a case-by-case basis. It is not possible to specify a priori a general time-frame — one that should be applied in all situations or maintained in the face of all contingencies — for taking a country from its unsustainable deficit to the "correct" balance.

A second observation is that adopting overarching and invariant budget rules, such as a pledge to reach a specified deficit target by a fixed date, has far more political than economic content. Various bodies have adopted such numerical targets in an effort to tie the hands of legislators and focus on the need to achieve (and maintain) fiscal consolidation. However, such targets do not substitute for political agreement over the underlying policy priorities. If the real problems are not addressed, targets for fiscal correction are likely to result in arbitrary actions, such as across-the-board cuts, as a means to meet the pledged target. Alternatively, the political bodies may seek to evade the rules by creating additional off-budget items, or the limits may simply not be enforced.

A third observation is that it is impossible to specify a "correct" fiscal balance that should serve as the goal of a fiscal consolidation. While Governments must have sustainable fiscal positions and must correct unsustainable deficits when they arise, it is generally easier to specify when a budget deficit is unsound than how to choose from among the policies that are sustainable. Financial markets increasingly serve as a barometer of a country's fiscal climate, but they have no unique insight into which fiscal balance is most appro-

priate from an economic, social and political point of view. Nevertheless, present-day Governments are encouraged to bias their actions in favour of restrictive fiscal politics. Achieving a low budget deficit as a medium-term goal may be viewed as a judicious strategy because it gives the government additional room for manoeuvre when the need arises, for example, when it must apply an expansionary fiscal impulse to combat a recession or respond to domestic calls for increased expenditure in some areas. Additionally, financial markets reward a cautious strategy with lower risk premiums attached to interest rates on government bonds. While there is sometimes concern that fiscal deficits and the resulting government borrowing "crowd out" private investment, cutbacks in government may deprive the economy of expenditures (such as for infrastructure) that would "crowd in" private investment. The relationship between national output and government activity and financing is not always clear, thus reinforcing the view that "there is no simple theory dictating the 'right' level of fiscal deficit".[8]

Fourth, the outcomes of the fiscal strategy and the measures adopted sometimes differ from those expected, and require a correction. It was observed in several instances, for example, that tax reform failed to generate the revenues expected because Governments had difficulty in implementing the reform. Equally, there are cases in which reforms in social spending have, contrary to intentions, led to a redistribution of income away from the poor. Finally, decentralization of authority in one area of activity, while a worthy goal in itself, has sometimes indirectly undermined the capacity of the central government in another area, for example macroeconomic management.

Fifth, an underlying difficulty observed in several of the cases investigated for the present study was that the initiatives assumed, at least implicitly, the existence of a government institutional capacity that was not yet present. A resulting observation is that many fiscal reforms, especially if they are innovative, require strengthened government capabilities in certain areas (for example, tax administration). Such institutional development thus has to be a central consideration in the design of fiscal reform.[9]

A sixth observation is that fiscal reform may enter the political agenda without there being a fiscal crisis to prompt this. Over time, circumstances are likely to change and the fiscal situation has to remain congruent with evolving socio-economic realities and changing social values. For example, demographic changes (ageing populations) and changing views about income redistribution can have important fiscal implications and can come to be reflected in the budget process (see chapter VI below).

A seventh observation is that, even though ideas about new fiscal departures for a country may have been circulating in various domestic and international circles for some time, a political crisis is sometimes the catalyst required to implement these changes. The political transformations in several countries at the turn of the decade were in themselves a call for major changes in the role of the State and provided an opportunity for fiscal strategy to be launched de novo. By the same token, post-conflict situations create the chance for Governments to redirect themselves towards economic growth and development and, in the process of this refocusing, provide opportunities for fiscal reform. A change in the political leadership has often been a necessary, if not sufficient, condition for launching fiscal reform. In general, even when a Government's current poli-

8 Nicholas Stern, "Macroeconomic policy and the role of the state in a changing world", in Edmond Malinvaud and others, *Development Strategy and Management of the Market Economy*, vol. I (Oxford, United Kingdom, Clarendon Press, 1997), p. 161.

9 See Nicholas Stern and Joseph E. Stiglitz, "A framework for a development strategy in a market economy", in Edmond Malinvaud and others, *Development Strategy and Management of the Market Economy*, vol. I (Oxford, United Kingdom, Clarendon Press, 1997), pp. 253-295.

cy may have become openly discredited, a new fiscal departure often requires a new government, a new policy team or some other form of new opportunity.

Eighth, for many developing and transition economies, the credibility of a new fiscal programme requires that it be part and parcel of an overall economic adjustment programme, embodying monetary, exchange-rate and structural adjustments. In particular, if fiscal adjustment entails a short-run contraction of aggregate demand and employment, other complementary policies to stimulate production are often required to ensure a smooth correction and the political credibility of the programme.

Adequate international support in such times can make a large difference in the country's capacity to sustain its overall strategy. Several of the country experiences described below serve as a reminder of the importance for a large number of countries of adequate external financing during an adjustment-cum-development programme that embraces fiscal consolidation. Adjustment financing provided by official institutions can enable Governments to reduce deficits in a measured and timely way and can make the difference between contracting and expanding output and employment. Considering the vital importance of the political dimension, the value of this support stands out: it helps build confidence in and thus domestic support for the programme, as well as accelerates the adjustment process, including assisting in budget consolidation through higher tax revenues. For most of the countries of the world, the support of the international community in underwriting fiscal reform remains essential. When responding to requests for such assistance, particular attention should be given to understanding the country-specific political dimensions of the reform and the related need for flexibility in terms of both the degree of precision attached to the fiscal consolidation and the period in which it is to be achieved.

V THE ECONOMIC AND SOCIAL ROLE OF THE STATE AND THE BUDGET

While there appears to be a consensus that the ambitions of government in the economic and social arena were excessive earlier, one must not lose sight of the fact that Governments provide important services and carry out politically mandated economic and social functions, and that only government will undertake many of these activities. Moreover, while government borrowing has been excessive in many cases, it does not follow that Governments should never borrow. Indeed, there is no reason that government outlays that benefit a generation of citizens – as for a bridge or sewer system – should be fully paid for by current taxpayers rather than by the beneficiaries over time through the servicing of bonds. It is important, in other words, to know where the boundary lies between an appropriate deficit and an excessive one. Partly, this entails a measurement problem: a variety of approaches and recommendations exist on what should be included in the government accounts, how the deficit should be defined and how small it should be. The present chapter thus seeks to sort through recent thinking about the proper scope of the economic and social activities of government and about budgetary goals for government.

A CAPSULE HISTORY OF POST-WAR THINKING ABOUT THE ECONOMIC ROLE OF THE STATE

Global optimism about government effectiveness probably peaked after the Second World War.[1] In the 1950s, perhaps half the world believed that state ownership of the means of production and central planning of economic activity were the most desirable means of organizing economic life. The debates in the 1920s and 1930s about whether detailed central direction of economic activity was even feasible were laid to rest by the sustained economic growth of the centrally planned economies, abetted by the technological achievement of the first sputnik space flight. Outside the centrally planned countries, economic organizatdied varying mixtures of state and market activity, albeit with a relatively large state role being deemed proper. Later, these views would change.

1 The capsule history and description of current thinking about the economic role of the State draws on myriad sources, notably the report of a high-level group organized by the Department for Economic and Social Information and Policy Analysis of the United Nations Secretariat (see Edmond Malinvaud and others, *Development Strategy and Management of the Market Economy*, vol. I, and vol. II, István P. Székely and Richard Sabot, eds. (Oxford, United Kingdom, Clarendon Press, 1997)). The evolution of thinking about the economic role of the State in different groups of economies can be traced more fully in the 24 volumes of the United Nations *Journal of Development Planning*, beginning with its first issue (United Nations publication, Sales No. E.69.II.B.24) in 1969, containing essays by P. N. Rosenstein-Rodan, K. N. Raj and N. P. Fedorenko. The last issue of the *Journal* was published in 1994, but in the late 1970s it had already ceased to be a journal about planning. It was not published during 1980-1983 and was reborn in 1984 as a journal of international economic policy, reflecting the shifting interest of the development community away from planning per se.

The State in the post-war market economies

Even in countries where capitalist views were held most fervently, the state sector entered a period of substantial growth in economic and social activities in the post-war decades. Some of this was related to cold war military procurement and security-related research, development and education funding, but the role of the State in purely civilian activities also grew. State enterprises were supported and new ones created well into the post-war era and public schemes of social insurance burgeoned. Citizen movements for social change pressured Governments to take on new social responsibilities and typically to address them through additional government expenditure programmes.

In the war-torn economies of Europe and Japan, government had been given a large role in post-war reconstruction. Ideas about government economic forecasting and non-coercive economic planning to ensure consistency and an adequate macroeconomic outlook were employed for recovery programmes in member countries of what became the Organisation for Economic Cooperation and Development (OECD). Planning was continued after reconstruction in some countries as a tool for consultation and concertation of information flows between government and various private-sector constituencies, aimed, *inter alia*, at anticipating and avoiding bottlenecks, and assuring adequate growth of demand and thus employment. Even where there was no formal planning, the "Keynesian revolution" spread to policy-making circles and government became responsible for managing aggregate demand through fiscal and monetary policy so as to achieve "full" employment with price "stability". These ideas about macroeconomic consistency and investment needs also fostered thinking about development planning for developing countries in the United Nations and the World Bank. Indeed, long-run indicative planning was virtually required of developing countries seeking international development assistance.

In developed and developing market economies, the intervention by government in particular sectors was defended in textbooks – and still is – in terms of "externalities", that is to say, factors that private actors would not include in their personal – or in the case of companies, profit – calculations. The government's role was in part to counter this by changing market signals (for example, making pollution costly for polluters) or making markets work better by acting as competition referee (through, say, prohibiting practices deemed unfair and countering monopoly).

In some activities, direct government provision was considered essential. This was the case, in particular, for "public goods" like national defence: if protection from invasion was sold in the market, all citizens would benefit whether or not they purchased the service and each person would have a strong incentive to let others pay. The only practical way to provide the service of national defence was thus through the government, as paid for by mandatory taxes.

Governments in market economies also directly undertook certain economic activities when it was believed markets operating on private profit principles would supply them in too-small amounts or to too-limited a range of potential customers, as in agricultural research and extension services or postal services. While market incentives could stimulate research leading to innovations that would be profitable owing to protection by patents, there would be little incentive for research that improved general knowledge of farming techniques.

Similarly, private postal services would profitably supply high-volume markets, but could not be expected to regularly pick up and deliver mail to every remote corner of a country on a low average-fee basis.

Related to this was the case made in some countries for direct government involvement in particular industries and firms for strategic reasons. Certainly, the petroleum sector had already seen considerable state-enterprise activity in the inter-war years, particularly in Europe and Latin America. The origin of the British Petroleum Company, for example, had lain in the shift of the British Navy from coal to oil powered ships. Strategic considerations also entered into government investment in telecommunication and transportation systems, as well as military procurement, although contracting with private enterprises to undertake work as the government's agent under negotiated agreements was also common.

A more general argument that was sometimes put forth with respect to requiring the State to directly undertake economic activities involved the claim that the time-horizon of profit-oriented business was too short, whereas a Government acting in the national interest would adopt a longer-term perspective. This was especially the case for industries that required very heavy capital expenditures and, in particular, the natural resource industries. It was thought that private and especially foreign business would not respect the long-term national interest when developing a nation's finite natural resources.

In developing countries, the same argument was extended to the need for the State to take up some part of the role that the private sector would have assumed in developed countries, on the grounds that the developing economies had no comparable entrepreneurial sector or adequately functioning financial markets. Also, the market was said to be too small for the kind of competition discussed in textbooks, so that exploitation by monopoly would prevail.

In all the market economies, the responsibility of government had been extended as well to the provision of a range of social welfare services, transfer payments and pensions (naturally to a far smaller degree in the developing countries, given their lower capacity, than in the developed ones). There were mainly two lines of argument for this, although a third was implicit and was later made a prominent part of the literature. The first was based on equity: while the spare, mathematical formulations of "welfare economics" rigorously demonstrated that the perfectly competitive market economy (were one ever to appear) could be efficient in a well-defined sense, there was nothing in the unfettered operation of markets to render the outcome equitable. Countries differed greatly in what and how much they wished government to do about the inherent inequities of the market system, but some measure of activity involving public programmes and income transfers to the vulnerable and poor appeared to be virtually universal.[2]

However, the equity argument for the existence of government programmes to assist the poor was by itself incomplete. Government activity is coercive (in taxation, if not also in all spending programmes) and it might be argued that private, voluntary organizations instead should be exclusively relied upon to take care of the equity problem and provide social relief. The rebuttal is that coercive financing of social programmes for the poor through taxation is warranted for the same reason that coercive financing for national defence is warranted: many people would rely on others to carry the burden of paying for charity and the level of funding would be too low. In short, there is an economic

2 Advocates of even the most minimal State accept this role for it, albeit restrictively, as indicated by such statements as "Freedom is a tenable objective only for responsible individuals. We do not believe in freedom for madmen or children". (See Milton Friedman, *Capitalism and Freedom* (Chicago, Illinois, University of Chicago Press, 1962), p. 33.)

argument for having a measure of government paternalism.[3]

The argument for state welfare activity, however, is still incomplete, as Governments do not in the main only reallocate income from taxpayers to the poor or establish spending programmes targeted on the poor – they also establish compulsory social insurance programmes to which the non-poor have to contribute. The traditional argument has been that, left to themselves, even affluent people make costly mistakes and the government, expressing the will of the majority, has the obligation to help people avoid those mistakes (especially if the government would have to cover the cost of the mistakes, as in the care – or even burial – of indigents). Thus, the government prohibits consumption of narcotics and requires participation in national pension schemes.

However, the modern analysis of social welfare policy goes beyond the ultimately unsatisfying paternalistic argument to point out the market failures that warrant a government role in several social policy areas, such as those encompassing unemployment, disability, sickness and other contingency programmes. These are instances of insurance-market failure, akin to the other market failures noted above. In the case of unemployment insurance, for example, the chances are large that claims would be made in hard-to-predict waves, reflecting the business cycle. This is very different from the typical insurance market, where probabilities of claims can be calculated based on actuarial tables and where the probability that one individual will make a claim is independent of the probability that another will do so. Even where probabilities are independent, other problems can arise. For example, if disability insurance (workers' compensation) were provided on a voluntary, private basis, the insurance company would certainly refuse to insure high-risk occupations, except at high cost. Moreover, even if a voluntary policy with a uniform premium were established in the market, competing insurance companies would offer a cheaper policy to the lower-risk participants, leaving the company offering the uniform premium with the high-risk (and thus high pay-out) cases. Only a mandatory programme avoids this "adverse selection" problem and only a requirement that premiums be paid for all workers keeps the cost manageable.[4]

Transition to models of a smaller State

The model sketched above of the economic and social role of the State in a market economy began to change in some countries even as it was still being developed in others. The modifications took Governments largely in the direction of reduced ambitions for state-directed activity. By the same token, the earlier self-confidence in central planning was eroded, as that system of economic organization experienced growing difficulties in dealing with an increasingly complicated and rapidly changing world. In both cases, optimism about what government could accomplish was tempered by disappointing performance, while the world seemed to be spinning more and more rapidly.

Today, the central planning model of economic organization is rarely advocated; and while socialist goals continue to be advanced in some quarters, most proponents now see decentralized, market processes as the main mechanism for organizing production. Economic planning of the indicative sort is out of fashion and macroeconomic policy has focused on long-run strategies for inflation control and exchange-rate management, as a way to build the confi-

3 Motives that prompt such legislation need not be only altruistic. Thus, not only was the growing popularity of socialism a concern to Chancellor Otto von Bismarck when he introduced social insurance legislation in Germany in the 1880s and to President Franklin Delano Roosevelt of the United States of America when he greatly expanded social programmes in the depths of the Great Depression of the 1930s, but fear of social unrest was said to be behind the enactment of the British poor laws of the fourteenth century, following the Black Death period (see Nicholas Barr, "Economic theory and the welfare state: a survey and interpretation", *Journal of Economic Literature*, vol. XXX, No. 2 (June 1992), pp. 757-758).

4 For a more complete review of the theoretical arguments, see Nicholas Barr, "Economic theory and the welfate state: a survey and interpretation", *Journal of Economic Literature*, vol. XXX, No. 2 (June 1992), pp. 741-803.

dence of the private sector and encourage investment. Much of the burden of the Keynesian concern about unemployment was thus shifted onto structural adjustment policies for reducing impediments to the smoother operation of labour markets. Governments in developed, developing and transition economies, have sold state enterprises; and the capacity of government to adequately provide basic social services – security, education, succour for the poor, pensions for the elderly – has been sharply questioned in certain countries where popular opinion of the efficacy and cost-effectiveness of many economic and social programmes of government is quite low. In developing and developed economies, non-governmental and voluntary organizations are increasingly taking on social functions that for a time were viewed as mainly the responsibility of the State.

Even at the height of interventionist thinking about the role of the State, however, there were more and less direct approaches to how the State should undertake its economic role. In some countries, for example, public utilities were state enterprises, while in others they were privately owned but were regulated by agencies of the government. At the time, a minority of economists expressed concerns about the costs of regulation (or direct state provision) and asked if the public was really better off being served by inefficient and sometimes compromised regulators or state enterprises as compared with what it had suffered under the predations of the unfettered market. Suspicions about the burden of regulation and intervention spread and by the second half of the 1970s, regulations were eased in specific industries and began to bring lower costs and improved services to customers (dramatically in the case of airline fares and long-distance telephone service in the United States of America). Tougher questions would henceforth be asked about the degrees and types of government oversight and intervention needed in each specific case.

Correspondingly, the orientation of international trade policy shifted. It had encompassed a mixture of, on the one hand, reduction of the high inter-war tariffs and, on the other hand, continued unilateral and negotiated market restrictions, particularly in sectors of political sensitivity in the countries concerned. Thus, many developed countries did not apply the rhetoric of trade liberalization to agriculture or textiles. Many developing countries restricted the operations of transnational corporations (TNCs), not least in the extractive sectors. In addition, producer and consumer Governments negotiated specific international commodity agreements into the 1970s in order to stabilize volatile international prices (only one remains in force today: for natural rubber).

As with domestic investment and regulation policy, however, by the end of the 1970s, the enthusiasm slackened for interventionist trade policies in several developed countries (although protectionist policies have yet to fully disappear from any of the major economies). Instead, there was an increasingly persistent call for liberalization of trade barriers and promotion of foreign direct investment, while Governments were supposed to withdraw from interfering in markets. Activist industrial policies continued to be pursued in certain countries, although with less and less confidence by the 1990s[5] Meanwhile, policy makers in many developing countries jettisoned inward-looking state-directed models of development for an export-oriented TNC-integrated model.

The disillusionment with the activist role of government in industrial and trade policy in many countries was paralleled by disappointment with the abil-

5 Even the generally agreed success story of Japan is offered not for emulation but study, as in Kotaro Suzumura, "Industrial policy in developing market economies" in Edmond Malinvaud and others, *Development Strategy and Management of the Market Economy*, vol.I (Oxford, United Kingdom, Clarendon Press, 1997), pp. 175-221.

ity of government to guide macroeconomic performance. The 1970s had seen the collapse of the Bretton Woods system of pegged but adjustable exchange rates, rising inflation and higher unemployment. The seven major developed economies began a sequence of economic summits in the 1970s in order to actively coordinate macroeconomic policy, but by the end of the decade the aims of the annual summits were considerably diluted.[6] Economists initially on the fringe of their profession who questioned the capacity of government to actively manage macroeconomic policy were heard with growing interest by the mainstream.

As the 1980s began, tight monetary policies were instituted to counter the inflation in developed countries, which provoked a major recession in those countries; but when interest rates jumped, this also revealed how vulnerable the high-borrowing large-state strategies of several developing countries had become, especially in Latin America. Debt crises also appeared in certain countries of Eastern Europe, underlining increasing inefficiencies in the centrally planned economies. The perception of the need for reform crept increasingly into the open there too.[7] Indeed, China revolutionized its revolution in 1978, when it turned to a new, more decentralized blueprint for economic organization.

In the developed economies, the arguments for a more limited role of government emphasized the primacy of individual choice over public choice and dissatisfaction with what appeared to have become a cumbersome and incentive-dissipating welfare State. In the economics literature, ideas that had been prominent earlier in the 1930s in analyses of large corporations were increasingly applied to the operations of government. It became more common to read about the inability of "principals" (individuals) to adequately monitor their "agents" (representatives of government) in public affairs. "Government failure" arguments were increasingly cited to justify reducing the responsibilities of government in the economy, offering a counter-argument in regard to the traditional "market failure" arguments for government intervention. The new concern also highlighted the "rent-seeking" opportunities that policy interventions created, that is to say, possibilities for turning public policy to private gain, as when policy regulated entry to an industry, and raised the profitability of entry and the incentive for bribery.

Instead of viewing the State as the representative of the public purpose, it was increasingly seen as a predator out to maximize revenues for government operatives or as a machine whose chief purpose was to perpetuate the tenure of office-holders. Even if not compromised, government was often accused of being ineffective. Candidates challenging for the highest offices in several developed and developing countries – joined in the 1990s by transition economies – would successfully run their electoral campaigns by claiming that the incumbents protected entrenched bureaucracies that were out of touch with the needs and wants of the people. They would argue that high taxes had not brought commensurate services. In some cases, military rebellion was welcomed by the citizens for ending "kleptocracy"; in other cases, popular revolt made it impossible for the existing Government to continue to function, until it was finally removed.

If confidence in the efficacy of state economic activity was thus eroded in many countries around the world, an additional factor was frequently pressed into service for limiting the economic ambition of government. This was the

6 See C. Fred Bergsten and C. Randall Henning, *Global Economic Leadership and the Group of Seven* (Washington, D.C., Institute for International Economics, June 1996).

7 See *World Economic Survey, 1988* (United Nations publication, Sales No. E.88.II.C.1), chap. VI; and *World Economic Survey, 1990* (United Nations publication, Sales No. E.90.II.C.1 and Corr. 1 and 2), chap. VI.

increasing globalization of the world economy and the growing belief that countries were in desperate competition for jobs and income.[8] In developed countries in particular, people heard that generous social programmes raised wage costs and rendered workers non-competitive, that taxes had to be lowered to raise profits in order to encourage investment so as to retain (or regain) competitiveness, that rich countries could no longer "afford" indefinite support to the poor, let alone the traditional degree of public support for the arts and culture.

While there seems to have been a large measure of exaggeration in this view, there was also a degree of truth. Prospective demographic trends showed ever-larger shares of retired workers and pointed to coming solvency problems for social pension schemes if existing retirement-income commitments and funding were maintained. More generally, ratios of government debt to gross domestic product (GDP) were rising and the deficits of some countries had become unsustainable. Given a general disaffection with government, the obvious political implication was to cut back government, not raise revenues further.

In the developing countries and in the international development community, comparable questions about the economic efficacy of the State were cast more in terms of how best to rapidly raise incomes and change economic structures. The debt crisis of the 1980s and two economically disastrous decades in Africa had discredited older policies. Meanwhile, several Asian economies had been quite successful through it all, but why? Explanations for the failure of development ranged from a focus on errors in details of policy design through to cultural analyses of why some countries had inherent entrepreneurship skills and other countries did not, to discussions of the design and capacity of States and the legacy of colonialism. The debates have been highly charged. Most famously, proponents of minimal government and liberalized policies and supporters of more interventionist policies looked at the same country experiences in Asia and drew very different conclusions.[9] The truth appeared to be somewhere in between, warranting an eclectic and pragmatic approach to industrial policy design.[10]

However, as in the developed countries, the rethinking of the economic role of the State in developing countries took place while pressure existed to curtail the operations of government. In this case, such rethinking was frequently in the context of restoring macroeconomic stability and reducing external imbalances after the economy had suffered an economic "shock" from a decline in export prices or an increase in international interest rates. In addition to implementing stabilization policies, large numbers of countries also embarked on a process of structural adjustment and reform, adopting more market-oriented economic policies to promote long-term growth and development.

While the adjustment experiences of countries have been diverse, the common thrust has been to reduce government control of markets and withdraw direct government participation in economic production.[11] More recently, emphasis has increasingly been placed on the complementarity between government and private economic activities and the reform of institutions that underpin the functioning of markets, in particular as regards seeking a properly functioning financial sector, adequate infrastructure and fiscal systems. Coupled with a general shift to more indirect forms of government intervention, this required development of new capacities in administration, regulation and enforcement of rules.

8 The economist's argument is more nuanced: even if the labour of one country is more productive than the labour of another in every tradable good, the productivity differences will be greater in some products than others and those differences establish "comparative advantages" which offer mutually beneficial grounds for international trade. What the complainants focused upon, however, was the fact that comparative advantage changed as more countries gained competitive capacity in producing more goods, which called for a changing structure of trade, with expansion of some industries, but contraction of others, and thus human dislocation, at least temporary real income declines and more uncertain futures.

9 For example, see World Bank, *The East Asian Miracle: Economic Growth and Public Policy* (Oxford, Oxford University Press, 1993); and "Symposium on the World Bank's *East Asian Miracle Report*", in World Development, vol. 22, No. 4 (April 1994).

10 For an assessment of the role of government in credit markets, for example, see *World Economic and Social Survey, 1996* (United Nations publication, Sales No. E.96.II.C.1 and Corr. 1), chap. V, sect. entitled "The role of government in credit markets".

11 See *World Economic Survey, 1989* (United Nations publication, Sales No. E.89.II.C.1 and Corr. 1), chap. VIII; and *World Economic and Social Survey, 1995* (United Nations publication, Sales No. E.95.II.C.1), chap. V.

In the centrally planned economies, the debate began with the question how the increasingly deep shortcomings of planned economies could be overcome using market mechanisms as aids to planning ended up with a complete jettisoning of planning in favour of market economy structures. Early rather extreme views about how much could be accomplished through markets were then modified both by recognition of the limits to markets and by growing appreciation of the effort needed to transform the institutions of a planned economy into the institutions of a market economy.[12]

The current degree of consensus

Today, in the second half of the 1990s, a fairly broad area of consensus on the role of the State in the economy – or more precisely, on how to think about the role of the State in the economy – seems to have been reached among policy scholars and policy makers.[13] It begins with the most fundamental and minimal requirement of government on which all agree: establishing and guaranteeing the institutional framework of law, public administration, defence and domestic security (sometimes called the "night watchman" State).

The consensus also recognizes the responsibility for – but also the limits to – the tools of macroeconomic management.[14] Most analysts would let automatic fiscal stabilizers operate to reduce the amplitude of economic recessions, but would do little more under normal cyclical circumstances; nonetheless, they would deploy discretionary fiscal tools if the economy was in a severe downturn.[15] On the other hand, only rarely do policy makers eschew attempts to stabilize prices through activist monetary policy. However, managing aggregate demand so as to improve employment prospects has largely been abandoned out of fear that unsustainable growth of demand will result. Whether or not this fear is justified, policy makers have been unwilling to take the risk, especially in light of the high cost of squeezing inflation, once begun, out of the system. Yet this risk aversion, if excessive, also has a cost in forgone income and employment from lower growth of output. In this regard, in short, the consensus does not extend to uniform policy recommendations.

The consensus recognizes that instances of "market failure" are pervasive; for example, even in highly competitive financial markets there are inherent problems of "asymmetric information" between lenders and borrowers that interfere with obtaining the most appropriate allocation of financial resources. On the other hand, proving the existence of a market failure is no longer considered sufficient demonstration that government intervention is warranted, owing to the many instances of "government failure". This means policy makers need to recognize not only the reasons for, but also the limits to, regulation and controls on markets. In this regard, the consensus is less about what policy measures to take in any particular market situation, than about what questions to ask. The consensus is thus highly sensitive to the institutional context of policy questions, but it also encourages thinking about how institutions should develop.

More generally, the consensus advocates approaching the question of policy intervention in terms more of seeking to work with markets rather than of operating against or without them. There has been considerable analytical work, for example, in trying to design market incentives into environmental policy in

12 Hungary, which has a relatively long history of economic reform, is a case in point: reacting to a system dominated by public ownership and an omnipresent bureaucracy, reform debates initially focused on a minimalist State, but then moved to growing support for a "strong government" (János Kornai, *The Road to a Free Economy: Shifting from a Socialist System, the Example of Hungary* (New York and London, W. W. Norton and Company, 1990), p. 206).

13 For a fuller statement of the consensus view, see Nicholas Stern and Joseph Stiglitz, "A framework for a development strategy in a market economy", in Edmond Malinvaud and others, *Development Strategy and Management of the Market Economy*, vol. I, (Oxford, United Kingdom, Clarendon Press, 1997) pp. 253-295.

14 For the case of the developed economies, see *World Economic and Social Survey, 1995...*, chap. IV.

15 Even the tight budgetary restrictions in the Maastricht Treaty on European Union for countries entering the Economic and Monetary Union, discussed below, have an escape clause for situations of sharp economic contraction.

contrast to administrative controls, so as to reach, say, a particular level of reduction of pollutants in a cost-effective manner.[16]

Importantly, there is nothing in the new consensus that requires abandoning the redistributional aims of the State, although the actions of some Governments seem to reflect a changing view of the degree of redistribution that the society desires. There also seems to be considerable concern about the disincentive effects and sense of dependency fostered by prolonged income support of the poor and unemployed. There does not seem to be, in other words, a firm view on what constitutes an effective anti-poverty programme, at least in developed economy contexts.

Finally, redistribution issues are increasingly thought of not only in the context of traditional reallocations from the rich to the poor, but also in terms of equity across generations. Government is still the central forum in which to develop a long-run perspective on development, which, *inter alia*, keeps environmental issues clearly in the agenda. Indeed, development is increasingly defined in a holistic manner, incorporating the entire panoply of actions that are grouped together more and more under the rubric "sustainable development".[17]

WHICH DEFICIT MATTERS? HOW SMALL SHOULD IT BE?

However large or small Governments see their economic and social role to be, they have to fit the aggregate of their decisions on individual spending programmes within an "envelope" of total budgetary expenditure, governed in turn by the need to finance the expenditure out of government revenues and borrowing. Principles have long been sought that would determine the limits to the size of the envelope, or at least to the size of the deficit that has to be financed by borrowing; but before such principles can be applied in practice, several complications in government accounting and budgetary measurement have to be sorted out. The first complication is in realizing that almost every government is a collection of public entities and that some degree of decision-making power resides in most of them. Where should one draw the line between the entities that are relevant to the "fiscal position" of the government and those that are not? Once the group of units and activities is decided, which of the various means of accounting and definitions of the deficit should the Government use to set its fiscal envelope? When those questions are resolved, it is possible to posit more precisely what principles to apply in order to determine how large a deficit is too large.[18]

The "government" in government accounts

Decision-making on budgets and their financing may be taken at many levels: central or local government may have its own budget; public-sector enterprises may be more or less autonomous (the central bank being a special type of public enterprise); social insurance funds may also have a measure of autonomy. If the political process were to independently set the budget for each unit, the total impact might not be what policy makers desired. A consolidated accounting is needed to be able to track the net public-sector participation in financial markets and the accumulation of financial claims against the government. In addition, economists seek to understand and policy makers to guide

16 See Maureen Cropper and Wallace Oates, "Environmental economics: a survey", *Journal of Economic Literature*, vol. XXX, No. 2 (June 1992), pp. 675-741; and World Bank, *World Development Report, 1992* (Washington, D.C., Oxford University Press, 1992).

17 See Rio Declaration on Environment and Development (*Report of the United Nations Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992*, vol. 1, *Resolutions Adopted by the Conference* (United Nations publication, Sales No. E.93.I.8 and Corr. 1), resolution 1, annex I); and Agenda 21 (ibid., annex II).

18 The discussion that follows pertains to fiscal budgets in market economies; the budgets of economies in transition are increasingly bound by the same considerations, although some still retain hold-over elements from central planning, where budgets served quite different functions (for a discussion emphasizing measurement issues, see Paul Marer and others, *Historically Planned Economies: A Guide to the Data* (Washington, D.C., World Bank, 1992)).

the impact of the government on total spending in the economy and thus on employment and inflation.

For such analytical purposes, economists and national accounts statisticians typically work with a concept known as general government, which includes the following subsectors: (a) central government; (b) state, provincial and/or regional governments; (c) local governments, such as municipalities and school boards; and (d) social security funds. Data for the general government aim to indicate the overall size of government operations in a country, the allocation of "government" as opposed to private or non-government resources towards various objectives, and the dimension and structure of taxes.

The central government is usually the main channel of the country's fiscal policy and therefore it assumes a special role in economic and monetary analysis. State, provincial and regional governments with independent financial competence mostly exist in federal countries. The main criterion for considering that an activity is carried out by a separate local government or is under the central government is whether the local unit "has the power to raise a substantial portion of its revenue from sources it controls and its officers are independent of external administrative control in the operation of the unit's activities".[19]

Social security funds are classified in two, alternative ways. In countries where they are at a rudimentary stage or their management is closely integrated with the government units with which they are associated, they are grouped with such units at each level of government. Alternatively, they are treated as separate subsectors of the general government. However, government social security funds are kept separate from pension funds or other insurance funds that embody agreements between individual employers and employees, which are grouped for statistical purposes as part of the financial sector of the economy.

The general government does not include public enterprises, even when they are entirely owned and controlled by units of government. In between business and government, they engage in commercial activities, but are also instruments of public policy. They are used by Governments to carry out economic and social policy, for example, through their pricing and investment decisions or their financial management activities. However, they are assumed to behave more like private enterprises than government per se and are grouped statistically with the enterprise sector.[20]

The special case of the central bank

One public institution that is usually government-owned and that, like public enterprise, is not classified as part of general government deserves special mention. This is the monetary authority or central bank. It has conventionally been considered not to be a part of general government because of its unique functions of issuing money and linking the domestic to foreign currency systems, but it often engages in fiscal-type activities in both the microeconomic and macroeconomic senses.[21] Especially for the latter reason, the view has spread that the central bank should be considered part of "the government", or more precisely that analysts should focus on a "consolidated" government sector that merges the "general government" and the central bank.

Central-bank microeconomic activities of a fiscal nature, called "quasi-fiscal" activities, may include policies that Governments explicitly wish to undertake as hidden or off-budget expenditures. However, they also include tradi-

19 International Monetary Fund, *A Manual on Government Finance Statistics*, (Washington, D.C., IMF, 1986), p. 14.

20 Statisticians recommend that state enterprises be a separate subgrouping in the enterprise sector, so that they may be analysed separately or as part of the analysis of government (see Commission of the European Communities, IMF, OECD, United Nations and World Bank, *System of National Accounts, 1993* (United Nations publication, Sales No. E.94.XVII.4), paras. 19.36-19.42).

21 While the central bank is the most common source of quasi-fiscal activities, it is not the only financial institution that engages in such activities; for more detail, see G. A. Mackenzie and P. Stella, "Quasi-fiscal operations of public financial institutions", *IMF Occasional Paper*, No. 142, October 1996.

tional activities that, while being fiscal in nature, were not formerly thought of in fiscal terms, as they are, increasingly, now. These can include lending to the domestic financial sector at below-market – and thus implicitly subsidized – interest rates. They also include rescue operations for failing financial institutions, which usually involve some element of subsidy, as when the central bank takes over a portfolio of "bad debt" from a troubled commercial bank in exchange for, say, securities having the same face value but clearly more actual value than the bad debt. In addition, when the central bank, as the regulator of the foreign exchange regime, operates a multiple exchange-rate system, it allocates at least some of the foreign exchange to importers of selected goods at favourable (subsidized) exchange rates.

In the same manner, the central bank undertakes fiscal-type activities when it raises revenues, although the fiscal revenues are usually more in the nature of user fees than taxes. Indeed, provision for collecting these revenues is not adopted as part of the country's tax code and may largely escape the parliamentary approval process that is at the heart of taxation systems. Aside from the explicit fees, such as charges that banks might pay the central bank for operating a deposit insurance scheme, there are several implicit taxes, such as the paying of no interest to banks on their mandated reserve deposits at the central bank. Also, in a multiple exchange-rate system, when the central bank requires that the foreign exchange proceeds from exports of particular items be converted to local currency at a disadvantageous exchange rate, there is an implicit tax. In addition, central banks might require importers to pre-deposit the value of their purchases (as a way to discourage imports) or require foreign investors to make non-interest-bearing deposits when they bring in funds (as a way to discourage speculative inflows). In both cases, the central bank then deprives the owners of the deposits of the opportunity to earn interest (here, then, is the tax element); indeed, the central bank will itself use the funds to purchase interest-bearing securities.

The most fundamental quasi-fiscal operations of the central bank, however, are those that grow out of its central banking role, per se. That is to say, the central bank earns profits from issuing money and it transfers much of these profits directly or indirectly to the government. The indirect transfer is most commonly embodied in savings on interest payments by the government on its debt whenever the government has covered its deficits by issuing bonds to the central bank at below-market interest rates. In such cases, the central bank's income statement would show low profits or even losses owing to the low earnings on its holdings of government debt, although this is really a matter of accounting for transactions between the central bank and the government. In other words, had the bonds carried market interest rates, the central bank would have reported higher income and transferred the difference back to the government as profits.

The main source of central-bank profits is not the quasi-fiscal activities already noted – indeed, these can involve substantial losses[22] – but the "seigniorage" that the central bank earns from being the issuer of the national currency.[23] As currently used, the term seigniorage is often associated with the "inflation tax", but the monetary authority will earn seigniorage even if there is no inflation. A growing economy needs additional money even if no prices change and the central bank can issue money having real purchasing power at

22 For example, a central bank can create large losses when it attempts to sterilize excessive capital inflows by issuing its own domestic currency securities which pay interest at a rate higher than that on interest earned on the foreign-currency securities purchased with the foreign-currency inflow it sterilized (for a review of policy-based sources of central bank losses, see Paul Beckerman, "Central-bank decapitalization in developing economies", *World Development*, vol. 25, No. 2 (February 1997), pp. 167-178).

23 Originally, seigniorage was the profit taken by a sovereign who cheated his or her people by mixing small amounts of base metals with the precious metal so as to be able to issue coins worth less than the amount stamped on them; in the modern world of fiat money, the monetary authority supplies a paper or metal token or bookkeeping entry at virtually no cost and the recipient takes this as being worth the full face value (as indeed it is).

virtually no cost to itself. The typical transaction entails the central bank's buying an interest-bearing asset (a bond, say) from a domestic seller and paying for it with a cheque which, after clearing through the banking system, ends up as some commercial bank's non-interest-bearing deposit in its reserve account at the central bank; hence the seigniorage profit.

It should be clear that if a central bank earns some seigniorage profit when there is no inflation, it will earn more profits when there is some inflation. It might also seem that the greater the inflation, the greater the seigniorage profit, except that the profits are in units of a currency that is depreciating in value because of the inflation. Also, people react to the inflation, especially when inflation is relatively high, by economizing on the domestic money balances they hold (measured in inflation-adjusted terms). In short, there are limits to the capacity of the inflation tax to generate income for the central bank. One authority captured the essence of the analysis in terms of a familiar metaphor:

"Since their invention, central banks have served as...the goose that lays the golden eggs. The free-range goose, conducting conservative monetary policy with a fair degree of independence, produces golden eggs worth less than 1 per cent of GNP...The battery-farm goose, bred specially for intensive egg-laying, can produce golden eggs in the form of an inflation tax yielding 5 to 10 per cent of GNP...The force-fed goose can produce revenue of up to 25 per cent of GNP for a limited period before the inevitable demise of the goose and the collapse of the economy...All three forms of central bank geese have been sighted since the 1920s."[24]

Indeed, there is a specific literature on the "optimal inflation tax" which, were central banks operated with the goal of maximizing profits to be transferred to their Governments, would cause great concern to those who have advocated expunging inflation from the world economy.[25]

Nonetheless, some Governments have drawn heavily on seigniorage profits for their financing for considerable periods of time, as may be seen in figure V.1.[26] The countries that have tended to rely more heavily on seigniorage taxes have also had the relatively less effective conventional tax collection systems. One may thus ask if, whenever a country has more than small rates of inflation for sustained periods, it is relying upon the fiscal revenue opportunities from central-bank operations. Certainly, if that is the case, when new monetary policies aim to cut back inflation, they need to be complemented by new fiscal policies so as to replace the seigniorage financing with new tax revenue or reduced expenditures.

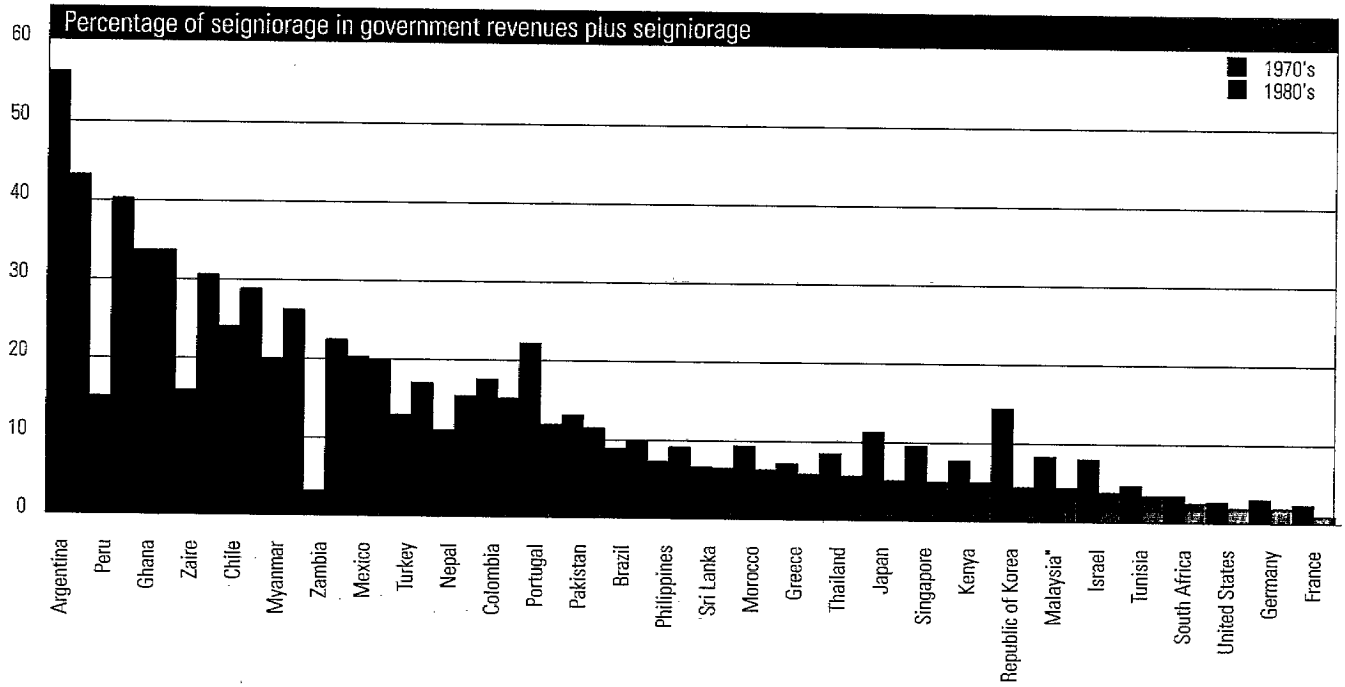
There are thus two or three key sets of public-sector activities to group together into fiscal accounts for analytical purposes: (*a*) the consolidated budget, which groups the general government and the central bank; (*b*) the general government position, which reflects the activities of government per se; and (*c*) the central government budget, which is usually the main field of fiscal operations of the national parliament. When Governments seek to mask the true budget situation by moving expenditures "off-budget", it is usually the central government budget that they are distorting. Many off-budget activities would be captured, at least in principle, by the general government budget and even more would be caught by the consolidated government budget. Nevertheless, depending principles under which the fiscal accounts were drawn up, some fiscal activities might still escape all of these fiscal groupings.

24 Maxwell J. Fry, *Money, Interest, and Banking in Economic Development*, 2nd ed. (Baltimore and London, Johns Hopkins University Press, 1995), p. 418.

25 Governments wishing to tap the profit potential of the inflation tax would also have to consider the trade-off between a higher real take from seigniorage with higher inflation and a lower real take from conventional taxes, the latter owing to the loss in the value of money between the time a tax liability is incurred and the time the tax is collected (see Pierre Richard Agénor and Peter J. Montiel, *Development Macroeconomics* (Princeton, New Jersey, Princeton University Press, 1996), pp. 112-120).

26 Seigniorage is measured as the change in the monetary base, which comprises currency in circulation and bank reserve deposits at the central bank (whose relationship to seigniorage was noted above).

Figure V.1.
SEIGNIORAGE[a] AND OTHER TAX REVENUES OF SELECTED COUNTRIES IN THE 1970s AND 1980s



Source: Thom Thurston, "When monetary policy gets fiscal", DESIPA Seminars in International Development, United Nations, 14 March 1997, based on data of IMF, *International Financial Statistics*.
[a] Measured as change in monetary base (in Chile, including prior import deposits).

The "accounting" in fiscal accounts

Private companies frequently use different sets of accounts for different reporting requirements. One set would follow the rules for recognizing income and expenditures for purposes of calculating company income tax liabilities. A second set might follow the rules required for reporting profits and declaring dividends to shareholders. A third set might be used for management decisions. In a similar fashion, Governments typically keep different sets of accounts for different purposes. Most Governments calculate their fiscal position one way for parliamentary budgeting requirements and a second way as part of their national accounts statistics. The deficit or surplus under these two systems carries different information. There is also a third set of accounts, however, which gives an additional perspective and, if more broadly employed, would help improve public decision-making.

Government finance approach

From the perspective of parliamentary fiscal control, where the bottom line consists in authorizing the treasury to borrow the funds needed to cover expenditures and obligations, the fiscal balance on a cash basis has been the standard approach to government accounting. This indicator of the fiscal situation shows the gap between total cash received by the government (but excluding

proceeds from borrowing) and cash paid out (the total of lending by the government minus repayments to the government and government expenditure, including interest payments, but excluding amortization of the government's own debt). When negative, this balance shows the government's net borrowing requirement.[27] Consequently, it shows the change in the government's indebtedness owing to its operations during the fiscal year. This has also been the basic measure of fiscal balance in *A Manual on Government Finance Statistics* issued in 1986 by the International Monetary Fund (IMF).[28]

One characteristic of this measure is that the government's lending and borrowing are treated asymmetrically. The Manual groups government lending with expenditure; in other words, it is "above the line" and affects the size of the deficit or surplus, whereas government borrowing is shown "below the line" (as a means of financing the deficit). Such treatment occurs in order to place all transactions that the government undertakes to achieve its policy goals above the line, while what is borrowed to finance the policy is below the line.[29]

On the basis of this principle, one might expect to see grants received by the government (for example, official development assistance) as part of the financing, but they are instead shown above the line in the standard presentation. The reason is that grants, as unrequited transfers, do not increase government debt. In some cases, however, Governments also measure their deficit before grants, especially when the grants are a large part of the government's general resources and cannot be assumed to be available indefinitely.[30]

In practice, the borderline dividing deficit-determining and deficit-financing categories is flexible. Governments carrying out essentially the same fiscal policies may report different budget balances owing to differences in how they categorize particular transactions. In addition, despite the common framework of the *Manual*, national budgetary and accounting practices vary significantly. Consequently, analysts need to supplement the summary measure of the cash deficit with other indicators when analysing a country's fiscal position.

As already noted, all transactions under this treatment are presented on a cash basis; that is to say, they are recorded only at the time payment occurs. Besides, only transactions in which cash is the medium of exchange are involved. This is the most widely accepted concept of budgetary balance, but it has its limitations.[31] The inclusion of one-off items (such as privatization proceeds, temporary taxes and savings from a temporary pay-freeze for civil servants) may give a distorted signal in respect of the underlying trends in revenue and spending. Also, under this system, a government might improve its perceived short-term fiscal position by "creative financing", such as guaranteeing additional borrowing by state enterprises instead of increasing direct subsidies to them or shifting deficit financing from bonds with standard semi-annual interest coupons to zero-coupon bonds that pay all interest when the bond matures. In these cases, cash budgeting would not take account of payment obligations that a government had assumed but not yet actually paid.

National accounts approach

A second approach to economic accounting for Government is contained in the System of National Accounts (SNA), which looks at government activity in the context of domestic production and use of aggregate output. This approach recasts government transactions into categories that affect GDP, income and

27 The actual or gross borrowing undertaken by the government treasury will be the amount needed to cover the deficit and amortization payments less any net amounts drawn from the government's liquidity holdings.

28 The *Manual* is in the process of undergoing a revision, an Annotated Outline for which was prepared by IMF in August 1996.

29 For details, see IMF, *A Manual on Government Finance Statistics* (Washington, D.C., IMF, 1986), pp. 104-105.

30 See *Guidelines for Fiscal Adjustment*, Fiscal Affairs Department, Pamphlet Series, No. 49 (Washington, D.C., IMF, 1995), pp. 19-20.

31 See Jonathan Levin, "Cash deficit: rationale and limitations", in *How to Measure the Fiscal Deficit: Analytical and Methodological Issues*, Mario Blejer and Adrienne Cheasty, eds. (Washington, D.C., IMF, 1993), pp. 103-112.

other macroeconomic aggregates. In practice, the government accounts in the SNA are generally estimated by making adjustments to the cash accounts prepared for the government finance statistics.

The most important adjustment is the SNA's giving a symmetric treatment to both lending and borrowing. It excludes net lending for policy purposes from government expenditure and regards it instead as financing, thereby placing it below the line. As noted above, government finance statistics treat net lending by government as if it were part of expenditure. The reason for the difference is that the SNA "draws the line" so that the amount below the line shows the net call of each sector (government, households and so forth) on the domestic and foreign resources of the rest of the economy. It measures, in other words, the sector's net lending or borrowing.

Corresponding to these different flow perspectives are different views of the stock situation. From a policy perspective, it is important in determining how financially exposed a government is, to know how its financial assets compare with its debt: this draws attention to the net asset position. At the same time, the treasury also wants to know the relative size of the government in the financial markets, which may be seen from the level of gross government debt. It is not that one measure is more important or revealing than the other; they serve different purposes.

Government accounts in the SNA also differ from the accounts under the Manual for government finance statistics in that the former exclude from deficit-determining items the transactions that involve changes in ownership of existing assets and liabilities and that therefore do not contribute to current income and production. These concern, for instance, deposit insurance outlays as well as asset sales, such as privatization receipts. Both cases involve rearrangements of assets already present in the economy and not part of new production.

The SNA approach differs from the government finance statistics approach in one additional important way – all transactions are recorded on an accrual basis in the SNA: "Accrual accounting records flows at the time economic value is created, transformed, exchanged, transferred or extinguished", irrespective of when payment is made or received.[32] Thus, economic activity is recorded at the time the activity occurs and all transactions, whether in cash or in kind, are recorded.

The advantage of accrual accounting is that it gives a picture not only of what has been paid or received, but also of what is in the pipeline or owed. In this regard, the arrears on payments by the government are of particular concern. When a government accumulates arrears, the cash-based measure of fiscal balance underestimates the government's need to call on financial resources. Also, by definition, cash accounting does not record non-cash revenues and expenses such as depreciation or, very significantly, changes in pension liabilities. Depreciation represents a consumption of the government's capital through use. There is no cash payment, but a real economic cost has been incurred. By the same token, the build-up of pension liabilities represents a real claim on government.[33] In both cases, supplementary statistics are needed in a cash accounting system to keep track of these developments.

Although the theory of accrual accounting is thus strong, it is not easily applied in practice to government. According to one study, most countries mainly make timing adjustments (as opposed to wide-scale adjustments,

32 Commission of the European Communities, IMF, OECD, United Nations and World Bank, *System of National Accounts*, 1993 (United Nations publication, Sales No. E.94.XVII.4), para. 3.94.

33 At present, the SNA, like the *Manual*, treats the operations of social security systems on a cash basis; that is to say, only current operations and not accrued liabilities are reflected (the exception is the accounting of contributions to social insurance schemes, which are to be recorded "when due without penalty").

including non-cash items) to cash-based accounting data for the general government sector. As a result, the measured differences between overall budget data recorded on cash and accrual bases are generally not large, although adjustments for individual items vary from less than 1 to 13 per cent of their unadjusted value.[34]

In the area of tax collection, the amounts accrued and actually paid may differ greatly. The problem is not knowing how much of the accrued taxes will eventually be paid. Here, the recommendation of the SNA itself is a compromise. Regarding the measurement of taxation revenue, the 1993 SNA said, "it may be preferable for analytic and policy purposes to ignore unpaid tax liabilities and confine the measurement of taxes within the System to those actually paid. Nevertheless, the taxes actually paid should still be recorded on an accrual basis at the times at which the events took place which gave rise to the liabilities".[35]

Despite these difficulties, a number of countries have adopted or plan to adopt accrual accounting as the standard form for presenting their government financial reports. Indeed, the possible change of the recording basis is among the most important issues in the planned revision of the 1986 Manual. Even so, this will still be far from the comprehensive balance-sheet approach advocated by many government finance experts.

Balance-sheet approach

The balance-sheet approach attempts to address many of the same shortcomings in the cash accounts approach and in the SNA approach (indeed, the 1993 SNA includes a full set of balance sheets that correspond to the flow accounts). The questions arising from the balance-sheet approach are a consequence of adapting to government the standard model of accounting for an enterprise. In this regard, the balance-sheet approach seeks to calculate the "net worth" of the government at a particular point in time (say, the beginning of the fiscal year). The net worth is calculated as the sum of the government's financial and real assets minus the sum of its financial and real liabilities. In this case, the fiscal deficit "would be equivalent to the dissaving (reduction in the net worth) of government in any year. Like the net worth of a firm, the net worth of a government is specified in its balance sheet, and the overall fiscal deficit in any period is equal to the difference in balance sheets at the beginning and end of the period".[36] The public-sector balance sheet should include not only marketable financial assets and liabilities, but also the value of its physical capital stock, the value of government-owned land and mineral rights, and the present value of planned tax revenues, as well as the present value of social insurance and other entitlement obligations.[37]

Net worth concepts of fiscal deficit, however, are in their infancy. So far, there have been only a few attempts to estimate (or even approximate) government net worth.[38] A complete set of data for such an exercise is unavailable in most countries. Indeed, even government balance sheets on a SNA basis contain only a subset of assets and liabilities. They do not include, for example, land, mineral rights, government taxing power, or contingent liabilities. Besides, the jury is still out on how to value some of the government's assets; for example, what is the value of the government's power to tax and spend?[39]

To date, only the Government of New Zealand, has introduced a full balance-sheet presentation of its fiscal accounts. In implementing its new system,

34 Don Efford, "The case for accrual recording in the IMF's Government Finance Statistics Systems", IMF Working Paper, No. WP/96/73 (July 1996), pp.22-23.

35 System of National Accounts, 1993..., para. 7.60.

36 Mario Blejer and Adrienne Cheasty, "The deficit as an indicator of government solvency: changes in public sector net worth", in *How to Measure the Fiscal Deficit: Analytical and Methodological Issues*, Mario Blejer and Adrienne Cheasty, eds. (Washington, D.C., IMF, 1993), p. 284.

37 For details, see W. H. Buiter, "Measurement of the public sector deficit and its implications for policy evaluation and design", *IMF Staff Papers*, vol. 30, No. 2 (June 1983), pp. 306-349.

38 There has nevertheless been considerable debate about the subject; for the case of the United States, see Michael J. Boskin, Marc S. Robinson and John M. Roberts, "New estimates of federal government tangible capital and net investment", NBER Working Paper No. 1774, December 1985; Michael J. Boskin, Marc S. Robinson and Alan M. Huber, "Government saving, capital formation and wealth in the United States, 1947-1985", NBER Working Paper No. 2352, August 1987; Robert Eisner, *How Real is the Federal Deficit?* (New York, Free Press, 1986), especially pp. 26-32; and "Consolidated financial statements of the United States Government, Prototype 1995", *Treasury Bulletin*, December 1996, pp. 107-113.

39 See Willi Leibfrits, Deborah Rosevear and Paul van den Noord, "Fiscal policy, government debt and economic performance", OECD Economic Department Working Paper No. 144, 1994, pp. 69-70.

New Zealand has had to make compromises, particularly in the valuation of assets and liabilities, as it is difficult to ascribe prices to many items. For this reason, no valuation has been put on, for instance, the Government's taxing power. Moreover, the picture shown by the overall balance, as well as its interpretation, is still far from clear (see box V.1).

Notwithstanding valuation, measurement and other problems, the balance sheet approach provides a useful tool for analysis and policy design, as it helps assess the sustainability and operating implications of government fiscal policy. For instance, cutting capital expenditure while government assets keep on depreciating reduces the capacity of government to provide its services. Only the balance-sheet approach shows this clearly. Furthermore, privatizing state-owned assets is seen in these accounts as the exchange of one asset, the state enterprise, for another asset, cash. By the same token, under this type of accounting, shifting social contributions between different accounts will simply net out.

The above notwithstanding, reliance solely on calculations of the fiscal balance as the change in net worth as shown on a government balance sheet could hardly be expected. First, net worth – and thus the government deficit or surplus – could sharply fluctuate as a result of normal valuation changes in assets and liabilities. Second, given the very low probability that some government physical assets will ever be sold, the valuation of those assets has to be almost notional. Thus, the balance-sheet approach is able to show only broad trends in government fiscal position and in practice would mainly complement conventional fiscal measures for the conduct of fiscal policy. Nevertheless, the balance-sheet approach provides information that is not readily available under conventional cash-based accounting and that can be very instructive.

The "deficit" in fiscal deficit

As we have seen, the focus in standard government finance statistics was on linking the annual operations of the government with its implications for the government's borrowing and thus for the change in its debt. The national accounts approach, in contrast, insisted on the symmetry between the government's financial assets and its debt; in that accounting system, the fiscal balance showed how much the net financial asset position would change owing to the deficit as the SNA defined it. The balance-sheet approach drew attention to the "net worth" of the government, including the value of its non-financial assets and obligations and defined the deficit as the change in net worth within a fiscal year. However, if the country was experiencing a substantial rate of inflation, each of these measures would give a misleading picture of the deficit; and the size of the deficit in each case would depend in part on where the country was in its short-term business cycle. Furthermore, fiscal "effort", in the sense of trying to foster government saving, cannot be readily determined from any of these measures.

Inflation and interest payments

Inflation can distort the fiscal accounts in various ways, but the most dramatic effects are in the financial elements of the accounts, particularly in the interest payments on public debt. Owing to this factor, even using the same fiscal deficit measure to compare fiscal positions across countries having differ-

Box V.1.
HOW BIG WAS NEW ZEALAND'S DEFICIT IN 1992/93?

In July 1994, New Zealand's Fiscal Responsibility Act entered into force and revolutionized government accounting. The Government had been undertaking public-sector reforms for several years and the new accounts were meant to bolster the ability of legislators and the general public to interpret Government budget trends, proposals and priorities. New Zealand's government accounts had previously been a variant of the standard international approach, which, it was said, gave rise to the concern "that when considering the need for additional expenditure on specific activities, the negative economic impact of fiscal deficits was usually too easily discounted".[a] Under the new law, the Government is required, *inter alia*, to publish comprehensive fiscal forecasts, report performance information and revise its outlook on a regular basis, and prepare all fiscal reports in accordance with Generally Accepted Accounting Practice (GAAP) – a set of rules approved by the New Zealand Accounting Standards Review Board and commonly used by private companies.

New Zealand's new financial statements are more business-like in terms of both information reported and timeliness. Information on the Government's fiscal position and its changes are quickly released and can be analysed by the press and the general public, especially by those who are familiar with business accounting, particularly the financial sector. Indeed, the new accounts include a balance sheet and the government-finance counterpart to an income statement, called the "operating statement", as well as a statement of cash flows that is conceptually close to what the traditional fiscal accounts sought to measure. The new accounts, however, consolidate the Reserve Bank of New Zealand (the central bank) and other entities into the data, whereas the older accounts pertained only to the central Government.

The major indicator of the Government's fiscal position is now the "operating balance", the difference between revenues and expenses in the operating statement. Data are recorded on an accrual basis and include non-cash flows, the most important of which are depreciation, and unrealized foreign exchange gains or losses, as well as changes in the liabilities for public employee pensions, changes in working capital and changes in the valuation of forests owned by the Crown.[b] The operating balance directly links with the balance sheet by adding to or reducing assets or liabilities. The balance sheet itself includes both financial and non-financial assets (such as land, buildings, roads and military equipment) and unfunded pension liabilities of public employees.[c]

The difference that the new approach makes can be appreciated by a comparison of the fiscal activity accounts for one year under both the old and the new system, which the Government facilitated by continuing to prepare both sets of accounts for a three-year period. Under the traditional system (as per the IMF presentation of the accounts), New Zealand had a small surplus of almost 0.1 billion New Zealand dollars ($NZ) in fiscal 1992/93 (see table). More precisely, this was the balance of the central Government. However, the consolidated deficit from government operations was NZ$ 0.8 billion, while the consolidated net cash flow was a deficit of NZ$ 1.3 billion.

The striking difference between the traditional fiscal deficit and the balance on net cash flow arose mainly from the difference between central government and consolidated government accounts. In other words, the central government fiscal deficit gave a misleading picture of the net increase in claims on the entire Government, which had not been nil but rather had risen by about 1.6 per cent of GDP.

It is also of interest that for the consolidated government, the deficit on net cash flow was larger than the net operating deficit, which was about 1 per cent of GDP, not 1.6 per cent. Here the difference arose largely from the difference between cash and accrual accounting. In essence, beginning with the deficit on net cash flows, if one added all the non-cash accrued costs and subtracted all the accrued income, one would get the operational deficit. In this case, total accrued non-cash income was larger than total accrued non-cash costs and thus the operational deficit was smaller than the cash deficit.[d] Such, in any event, are the kinds of factors to which the new system explicitly draws attention.

[a] Tony Dale and Ian Ball, "Fiscal responsibility: New Zealand style", *Australian Accountant* (May 1996), p. 30.

[b] For more details, see OECD, *Economic Surveys, New Zealand, 1996* (Paris, 1996), pp. 158-163.

[c] Pension obligations to the general public and welfare benefits are not included; indeed, they would be hard to measure reliably using accounting concepts.

[d] The largest accrual costs were the growth in pension liabilities and the depreciation of government capital, and the largest accrual incomes were the rise in the commercial value of government forests and the retained profits of state-owned enterprises and Crown entities (for a formal reconciliation of the operating and cash flow balances in 1992/93, see OECD, *Economic Surveys, New Zealand, 1996* (Paris, 1996), p. 160).

TWO VIEWS OF NEW ZEALAND'S FISCAL PERFORMANCE IN 1992/93[a]
(Billions of New Zealand dollars)

Budgetary central goverment[b]		Goverment financial performance[c]	
		Operating Statement	
Total revenue	26.7	Revenue, earned from	29.8
Tax revenue	24.2	Taxes, fees and so on	26.0
Non-tax revenue	2.5	Operations	3.9
Total expenditure	28.4	Expenses	31.4
Current expenditure	27.6	Government functions	27.1
of which		Finance costs	4.0
Interest payment	3.9	Net foreign exchange loss/gain	0.3
Capital expenditure	0.8		
		Net surplus from state-	
Lending minus repayments	-1.8[d]	owned enterprises and so on	0.8
Overall surplus/deficit	0.1	Operating surplus/deficit	-0.8
		Statement of cash flows	
		Net cash flow	-1.3
		From operations	-1.2
		From investing activities	-0.1

Sources: IMF, *Government Finance Statistics Yearbook, 1996*; and Statistics New Zealand, *New Zealand Official Yearbook 95*.
[a] Fiscal year, ending 30 June 1993.
[b] As per standardized presentation of IMF.
[c] As per accounting standards established under New Zealand Fiscal Responsibility Act, 1994 (data pertain to consolidated government).
[d] Negative number indicating net repayment to Government.

ent inflation rates would be unreliable. Even if countries used the same deficit definitions, had similarly high inflation rates and were otherwise identical, the measured deficits could be significantly different if they used different types of bonds to finance their deficit.[40]

This distortion arises because as inflation rates rise, nominal interest rates rise to compensate bondholders for the loss in the purchasing power of the money they have lent the government. In other words, if the annual interest rate had been 10 per cent (had there been no inflation) and if the annual inflation rate is 40 per cent, then the actual interest rate will be about 50 per cent. The standard bond pays the holder the face value at maturity and thus after one year of 40 per cent inflation the bondholder will have an asset whose purchasing power has lost 40 per cent of its value. An interest payment of 40 per cent, however, would compensate for that loss and thus one way to sell bonds in a high-inflation environment is to make the interest rate adjustable and keyed to a shorter-term domestic rate which will change to reflect inflation changes.

In the above example, the full 50 per cent interest payment is considered part of expenditures from an accounting perspective, although one could say that four fifths of this was not really interest at all. It was a payment that maintained the real value of the debt and it is more like amortization or the incur-

[40] See Vito Tanzi, Mario Blejer and Mario Teijeiro, "Inflation and the measurement of fiscal deficits", *IMF Staff Papers*, vol. 34, No. 4 (December 1987), pp. 711-738.

ring of an additional loan; in other words, it is actually part not of the interest expense, but of the financing. Moreover, if the bond were indexed to the rate of inflation so that its face value rose over time to maintain its real value, the interest rate on the bond would remain at 10 per cent of the initial face value and the interest expense would not rise. The government's nominal obligations would rise by the same 40 per cent as a result of the indexing, but the accounting treatment would be different. Thus, if a country uses indexed bonds in an inflationary environment, it will show smaller deficits than if it uses floating-rate bonds.

To take account of the impact of inflation on interest expenditures, the notion of "operational balance" has been devised. Conceptually, this is the conventional cash-flow fiscal deficit with the effect of inflation on interest payments removed. In practice, there are technical complications in estimating the amount of inflation-induced interest payments that should be deducted. Nevertheless, estimates show the effect to be potentially dramatic in high inflation environments, as some of the examples in table V.1 indicate. In most cases, the fact that the "operational" deficit is smaller than the conventional deficit implies that the amount of fiscal correction needed to balance the fiscal accounts is smaller than indicated by the conventional deficit, assuming that fiscal correction is part and parcel of an anti-inflationary stabilization plan.[41] Moreover, if a country with a high deficit and high inflation begins to reduce the inflation rate, this will quickly be reflected in lower budget deficits. By the same token, in later years when the inflation rate is relatively low, further reductions in the deficit will have to come from real spending and revenue raising activities.

Given the importance and yet the complexity of the operational cash deficit concept, a simpler method of abstracting from the interest-payment/inflation phenomenon is frequently used. This measure, called the "primary balance", is simply the standard cash-flow fiscal balance excluding government interest payments in the expenditure data. It is readily calculated from the standard presentation of government finance statistics. It is a measure of fiscal balance that is independent of the debt-servicing burden, which is an exogenously determined cost to the government and in many cases has been inherited from an earlier administration. Table V.1 shows examples of this measure as well. Calculating the primary deficit can thus shed light on some fiscal phenomena. Others, however, have to be addressed with different fiscal concepts.

Cyclical influences

Short-term fluctuations in economic activity can significantly obscure underlying trends in the budget. An economic downturn automatically worsens the deficit because of lower tax revenue and extra benefits for unemployment compensation and other programmes. Conversely, a shrinking budget deficit during the recovery from recession may give a misleadingly rosy picture of the government fiscal position. This pattern calls for a budget indicator that distinguishes between the change in the government's budget balance that was the result of policy actions and the change induced by fluctuations in economic activity.

Different methods have been developed to make that adjustment. All share one common feature: they estimate the budget balance that would exist if some reference set of economic conditions prevailed. The early attempts to estimate

[41] In the case of Ghana in 1987, as shown in table V.1, the operational fiscal deficit was larger than the conventional deficit, meaning that real interest rates were negative in the year shown.

Table V.1.
CONVENTIONAL, OPERATIONAL AND PRIMARY FISCAL BALANCES FOR SELECTED COUNTRIES IN SELECTED YEARS

Percentage of GDP

	Conventional	Operational	Primary	Memo item: Inflation rate (Annual percentage change)
Argentina				
1983	-10.2	-10.2	-4.2	343
1985	-4.1	-4.1	-1.7	672
1987	-6.3	-5.6	-1.6	132
Brazil				
1981	-13.0	-6.2	-4.8	108
1985	-27.9	-4.3	-0.6	245
1988	-45.3	-4.0	1.6	683
Chile				
1986	-1.9	-1.2	2.8	20
1988	3.6	3.8	8.0	15
Ghana				
1985	-2.7	-0.4	-1.2	10
1987	-0.3	-0.4	1.2	40
Israel				
1985	-5.4	-1.6	10.0	211
1988	-4.9	-3.6	4.2	19
Kenya				
1982	-6.5	-3.2	-2.9	17
1986	-5.4	-0.8	-0.5	9
1987	-7.6	-6.3	-2.9	6
Mexico				
1981	-13.8	-10.8	-9.1	28
1985	-9.5	-1.0	3.3	58
1987	-15.9	2.0	5.0	132

Sources: Mario Blejer and Adrienne Cheasty, "The measurement of fiscal deficits: analytical and methodological issues", *Journal of Economic Literature*, vol. XXIX, No. 4 (December 1991), p. 1,656; and IMF, *International Financial Statistics* (consumer prices).

Note: Data are not comparable across countries, as they originated from different sources and accounting definitions may have varied. All are data for fiscal years.

the structural component of the budget deficit date back to the 1940s when the concept of "full-employment" – later "standardized-employment" – budget balance was developed in the United States. The full-employment budget surplus or deficit "measures what would be the budget position if the economy were at full employment and the legislated tax and spending structures were in effect".[42] The standardized-employment deficit is defined as "a measure of the imbalance in the budget that would exist if the economy were operating at capacity and tax collections and spending for such purposes as unemployment compensation reflected that robust economy".[43]

Since then, various methods have been developed and are now regularly employed by OECD, IMF and many Governments. For instance, in the United Kingdom of Great Britain and Northern Ireland, the Government uses a measure called the "control total" in short-term policy analysis. This is derived by subtracting from total spending interest on government debt and cyclical social security benefits (including unemployment benefits, job-seekers' allowances and income support paid to people of working age); these items "are most affected by cyclical factors and are therefore not subject to government expenditure policy in the short term".[44]

No single method, however, is universally accepted for defining the structural deficit and it is often difficult statistically to distinguish cyclical from underlying elements of the fiscal accounts. The most widely used measures ask what the deficit would have been if GDP had been at the level given by its trend rate of growth or if the economy had reached its estimated "potential output" – an extension of the full-employment concept. The trend-output measure is the most simple: it is derived by "smoothing" actual GDP growth over an economic cycle to find the average rate of growth and then determining what GDP would have been in the budget year being studied if it had grown at its trend rate since the beginning of the cycle.[45]

The simplicity of the trend-output approach, however, is also the reason that it is increasingly being abandoned for the potential-output approach. That is, the trend-output approach begs important but difficult questions about the rate of technical progress or the "natural" rate of unemployment. It is also rather mechanical: it does not depend on any model of how the economy works, does not address structural limitations and does not consider whether adequate supplies of key factors of production would have been available to realize the trend-output growth rate for the duration of the cycle. For such reasons, OECD decided to shift to a potential output measure in its macroeconomic studies.[46]

The potential output benchmark as defined by IMF, a long-time proponent of this method, is "the maximum sustainable level of economic activity that is consistent with stable inflation".[47] Calculations of potential output employ an econometric production function to estimate output that would result from fully employing the capital stock and available labour inputs and assuming a continuation of the trend growth in productivity. The level of labour resources chosen is that estimated to be consistent with the "non-accelerating inflation rate of unemployment" (NAIRU).

Once potential output is estimated, measuring the structural deficit requires breaking down government revenues and expenditures into cyclical and structural components. This is accomplished through a combination of adjustments of revenues and expenditures in proportion to the difference between actual

42 Paul A. Samuelson, *Economics*, 10th ed. (New York, McGraw-Hill, 1976), p. 364; the concept was also used regularly in the annual reports of the U.S. Council of Economic Advisors, for example, the report of January 1962, pp. 78-81.

43 U.S. Congressional Budget Office, *The Economic and Budget Outlook: Fiscal Years 1996-2000* (Washington, D.C., January 1995), p. 28.

44 John Flemming and Peter Oppenheimer, "Are government spending and taxes too high (or too low)?", *National Institute Economic Review*, July 1996, p. 58.

45 See Jean-Claude Chouraqui, Robert P. Hagemann and Nicola Sartor, "Indicators of fiscal policy: a reassessment", Working Paper No. 78, Department of Economics and Statistics, OECD, April 1990.

46 Claude Giorno and others, "Potential output, output gaps and structural budget balances", *OECD Economic Studies*, No. 24 (1995), pp. 167-209.

47 IMF, "Structural budget indicators for the major industrial countries", *World Economic Outlook* (Washington, D.C., IMF, October 1993), p. 101.

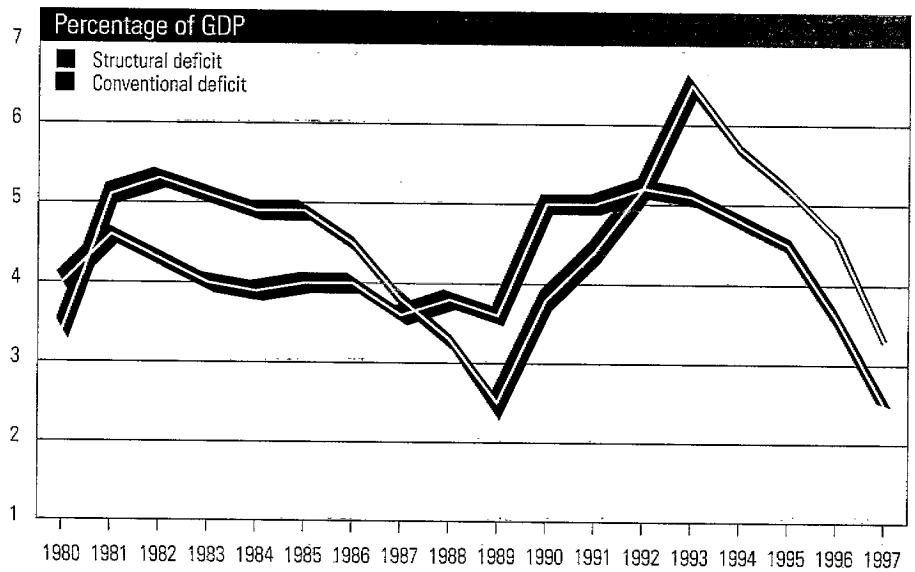
GDP and potential GDP and adjustments governed by estimated income elasticities for selected spending and revenue components. As estimated by OECD, tax revenue changes are much more significant than those for expenditure and account for about 80-90 per cent of the total adjustment.[48]

The usefulness of the concept of structural deficit is well illustrated by one of the Maastricht criteria for entry into the single-currency area of the Economic and Monetary Union (EMU), namely, a ceiling of 3 per cent of GDP on the permissible budget deficit by 1997 (see box V.2 below). In the late 1980s, there were two reasons why that target might have seemed attainable for many European Union (EU) countries. First, for the EU as a whole, the 1989 deficit was only 2.5 per cent of GDP and represented the culmination of a pattern of almost continuously falling deficits since 1982 (see figure V.2). Of course, this figure was an average and not every country in the EU had such a low deficit in 1989. Even though most countries then ran higher deficits in 1990 and 1991 than in 1989, these data suggested that a 3 per cent deficit would be largely attainable in the target year, 1997, especially if the region were not in recession.

However, the challenge that the EU set for itself with this target can be seen more clearly in terms of the structural budget deficit. This was never less than 3.6 per cent of potential GDP for the EU as a whole in the 1980s and it had not been on a strongly declining trend. Moreover, the actual deficit was smaller than the structural deficit each year from 1988 to 1991, indicating that EU was producing above "capacity". Inflation was high by the standards of those years (about 5 per cent per year) and unemployment was relatively low by European standards (about 8 per cent). Then, with the accession of the eastern Länder (States) to the Federal Republic of Germany and other developments in the region, the structural deficit of the EU jumped to about 5 per cent of potential

[48] Giorno and others, *loc. cit.*, p. 192.

Figure V.2.
STRUCTURAL AND CONVENTIONAL FISCAL DEFICITS OF THE EUROPEAN UNION, 1980-1997



Source: Data of OECD, *Economic Outlook*, No. 60 (December 1996).

Box V.2.

THE ECONOMIC LOGIC OF THE MAASTRICHT BUDGET CRITERIA

When the European Union embarked on the creation of a single-currency area in Europe and the replacement of several of the world's major currencies with the "Euro", it also decided to set restrictions on the macroeconomic conditions and policies of countries that would become members of the new currency area. As such, the Maastricht Treaty on European Union contained convergence criteria for Economic and Monetary Union (EMU), including a stringent application of the concept of sustainable fiscal deficits. Fearing that EMU without economic convergence might be fragile and a source of tension, European Community (EC) Governments agreed in the Treaty to include four convergence criteria (the specific reference values of the criteria were contained in a protocol annexed to the Treaty). Satisfying the criteria is necessary in order to join EMU and members violating these limits – at least the fiscal ones – will incur penalties. The first three requirements are related to inflation rates, interest rates and exchange rates.[a] The fourth requirement refers to fiscal policies and specifies limits on both fiscal deficits and government debt. The general government deficit must not exceed 3 per cent of GDP and public debt must not exceed 60 per cent of GDP at the start of EMU.

While the first three rules are rather strict, the fiscal criteria do nonetheless contain some flexibility, because the deficit concerned is the fiscal cash deficit, unadjusted for cyclical influences or the effects of unforeseen shocks. The Treaty also allowed room for political negotiation on the entry of individual countries. According to article 104c of the Treaty, a deficit above 3 per cent may be acceptable if "it is exceptional and temporary and the ratio remains close to the reference value" or if it "has declined substantially and continuously and reached a level that comes close to the reference value". Similarly, a debt-to-GDP ratio of over 60 per cent may be admitted if it is "diminishing and approaching the reference value at a satisfactory rate".

The reference value of 60 per cent for debt was close to the average ratio of debt to GDP for the countries that composed the EC when the Treaty was drafted in 1991 (61.7 per cent), while the 3 per cent deficit limit was below the 1991 average deficit of 4.3 per cent of GDP. However, both targets seemed within reach.[b] A possible inspiration for these rates was the "golden rule of public finance",[c] postulating that current expenditure should be covered by current revenue and that only capital expenditure should be financed by borrowing. As it happens, EC public investment averaged almost exactly 3 per cent of GDP during the period 1974-1991.

In applying these criteria, the boundaries of the public sector had to be decided. European Governments perform operations that in other countries are associated with the non-government sector, including through public enterprises, public financial institutions, and public administrative/non-profit agencies. Conversely, non-government actors have taken on quasi-governmental functions.[d] Moreover, these divergences from traditional roles usually arise from country-specific circumstances which render cross-country comparisons of the government deficit more difficult.

The European Commission explicitly provided that the European System of Integrated Economic Accounts would establish the guidelines for "drawing the line" around what was to be included in general government, as the term was employed in the Treaty of Maastricht, and consequently would determine the scope and the coverage of the public sector that were relevant for measuring the public deficit and debt. The essential difficulty is that the structure of government finances is evolving much faster than the statistical systems to measure them. The European System of Integrated Economic Accounts was drafted in 1979 and though a new system was agreed in 1995, it will not be introduced until 1999 because it could change the size of some countries' GDP, thereby distorting budget calculations.

Meanwhile, the 1979 system does not cover economic changes that have occurred in the past 15 years. For example, it has become harder to determine whether pension benefits or insurance schemes represent a "state expense" or a "private expense", particularly since some of these schemes are partly self-funding and non-universal.

a The first criterion requires that an entrant's inflation rate must be no more than 1.5 percentage points above that in the three members with lowest inflation. The second criterion requires that exchange rates should be stable and should comply with the normal fluctuation margins provided in the Exchange Rate Mechanism of the European Monetary System for at least two years. According to the third criterion, long-term interest rates should converge to a level no more than 2 percentage points above that achieved by the three lowest-inflation countries.

b The debt and deficit targets were mutually consistent under an assumed long-run growth rate of nominal GDP of 5 per cent a year (see W. Buiter, G. Corsetti and N. Roubini, "Excessive deficits: sense and nonsense in the Treaty of Maastricht", *Economic Policy*, vol. 8, No. 1 (April 1993), pp. 57-100).

c The European Commission refers to this rule in "One market, one money", *European Economy*, 1990; and in "The economics of EMU", *European Economy*, special edition, No. 1, 1991.

d For instance, there is a difference only of degree between a Government's compulsory pension system and a firm's pension scheme that is mandatory for all employees.

Statistical guidelines also leave Governments enough room to make accounting interpretations that other Governments might not make. The Statistical Office of the European Communities (Eurostat) is empowered, however, to take an official position on such data issues, after consultation with the European Committee on Monetary, Financial and Balance of Payments Statistics (made up of representatives from national statistical institutes and national central banks of EU member countries). A particularly delicate area is represented by the privatization of state assets. While Eurostat has taken the position that privatization should not be used to boost finances, some Governments have relied on this measure to lower the deficit.

Adherence to some set of fiscal restrictions is thought essential to the operation of EMU, given how it was designed, namely, as a unified single-currency area with a relatively small central budget and many large national government systems. In other words, there has been concern that excessive deficits in one member country could create negative spillovers for the others. At the extreme, an individual country's fiscal crisis could lead to the invocation of the "no bail-out clause",[e] which would be politically as well as financially disruptive; but even before such a crisis point was reached, a Government would have to finance a large budget deficit by borrowing on the financial markets and, if done excessively, this would raise interest rates. In other words, because the financial markets within EMU could become as integrated as the markets in the different States of the United States of America, the higher interest rates in one country would spread throughout the currency area (at least if the high-deficit country was a large one) and crowd out private investment elsewhere in the Union.

Certainly, Governments joining EMU would be giving up one traditional source of fiscal revenue, namely seigniorage, as they would no longer have a national money. They would also lose the option of an "inflation tax" to escape from an unsustainable deficit situation. However, as would not be the situation in a strong federal system, the citizens of a country in EMU with a strong recessionary economic shock would receive relatively little in the way of automatic-stabilizer transfers from the centre. States in the United States do not operate fiscal policies and do not need to. Countries in EMU will have very limited opportunity to employ fiscal policy, but may someday need it.[f]

[e] According to the Treaty's "no bail-out principle" in article 104b, there will be no bail-out by the EU or its member States of a member State that fails to service its debt; the national debt is and remains the exclusive obligation of the defaulting country and of its creditors who will bear its consequences.

[f] This potential quandary was realized when the Maastricht Treaty itself was fresh; see, for example, John Eatwell, "European Monetary Union: problems remaining after Maastricht", in *Supplement to World Economic Survey, 1990-1991* (United Nations publication, Sales No. E.92.II.C.2).

GDP through 1994.

EU countries have pushed their deficits down sharply since 1995 (see figure V.2), and OECD's December 1996 forecast suggested that the Union as a whole would make the grade (as would almost every country) if the Maastricht budget criterion for 1997 were the structural deficit. However, the same OECD forecast pointed to less of a success for the EU as a whole (and relatively few countries were expected to pass the test) using the conventional deficit indicator .

One should not rush to criticize the authors of the Maastricht Treaty, however, for not adopting the structural deficit for their budget criterion. There is a considerable amount of theory and econometrics contained in the estimation of the structural budget position, and thus there is also considerable room for error, for misspecifying the impact of different GDP levels on budget items and, most significantly, for misspecifying the economic model of the economy.

Even if the fundamental structure of the model were accepted, this approach would have the drawback that the specific econometric relations in the model are derived from past data. The implicit assumption that the economy continues to work as it did in the past is sometimes simply invalid. For example, the NAIRU for the United States has for years been confidently estimated at 6 per cent, whereas unemployment in the United States has been 5.5 per cent or less for over a year and inflation has remained relatively low and

[49] In light of the NAIRU's apparent decline in the United States, an interesting symposium on the concept and measurement of the natural rate of unemployment was recently published in the *Journal of Economic Perspectives*, vol. 11, No. 1 (winter 1997), pp. 3-108.

not shown signs of increasing.[49] Estimates of "potential GDP" for the United States that employed the conventional NAIRU estimate would thus have underestimated potential GDP and overestimated the structural budget deficit.

Saving and investing

Fiscal accounting helps policy makers ensure that government operates responsibly and that when the government borrows it does so at a sustainable pace and in an appropriate manner. The adjustments to the measured deficit discussed above either altered interest payments owing to the effect of high inflation or modified different categories of spending and revenue owing to cyclical movements of GDP. The goal in both cases was to produce a more reliable measure of the overall fiscal deficit and thus of present and future borrowing needs. However, fiscal policy is about more than just "sound" budgeting; there is also concern about the composition of spending and revenues. In a development context, in particular, there is a deep concern about government saving and investment. A different budget measure is needed to track performance in that regard.

The standard measure of this is the "current fiscal balance", also called government saving or "own saving". This puts all current expenditures and revenues above the line and all investment and "capital revenues" (such as proceeds from selling government assets) below the line,[50] and provides a measure of the government's contribution to national saving. The current balance concept recognizes that investment spending is different in nature from current spending. Unlike current spending, public investment is assumed to generate income, sometimes directly but usually indirectly, as by providing infrastructure that raises the rate of GDP growth.

50 "Own saving" also puts grants received below the line. For some developing countries, this can be a significant form of financing that does not raise public debt.

The recognition of the different natures of current and capital spending has led to the formulation of the so-called golden rule of public finance: balance the current budget and borrow no more than the amount of gross public-sector capital formation. This is based on the assumption that "public sector capital generates real revenue that is sufficient to cover its interest cost".[51] Hence, borrowing to pay for capital expenditure is effectively self-financing under this assumption. It also distributes the cost of the investment among the beneficiaries, today and in the future, rather than ask present taxpayers to fully pay for the services that future taxpayers will receive from the construction in the present of roads, bridges, sewers and so on.

51 Nigel Pain and Gary Young, "The UK public finances: past experience and future prospects", *National Institute Economic Review*, No. 158, October 1996, p. 28.

However, the distinction between current and capital spending is not always easy to draw. Current spending in several standard categories – such as for health and education – may be very productive in the same sense as physical capital formation; that is to say, these forms of spending all raise labour productivity. However, Governments do not generally have a human capital development budget. Conversely, one can find examples of unproductive public investment projects. Moreover, debt incurred for public investment still has to be serviced and so the golden rule does not free Governments from the obligation to raise revenues in the future to service the incremental debt; in effect, the government has to appropriate enough of the returns from the public-sector investment (for example, increase in GDP) to cover the cost of the borrowing. This depends on the income elasticity of its tax system or on the programming of revenue enhancement measures when the investment decisions are taken.

The "sustainable" in sustainable deficit

Economics as a discipline has no general prescription for the appropriate level of public debt or for the ratio of public debt to GDP. There are sound reasons for public debt not to be zero. At a minimum, short-term government borrowing allows the timing of government expenditures to differ from the timing of receipts of tax revenues without requiring the government to maintain large average bank balances. At the same time, a market in government bills (the financial instruments for short-term government borrowing) provides a useful, relatively risk-free tool for cash management in the banking and enterprise sectors. In addition, the golden rule argument above has suggested that it is appropriate to finance some government expenditures with long-term bonds and these instruments provide a useful, risk-free vehicle for savings.

Thus, the ratio of government debt to GDP should be greater than zero, but "we do not have any theories that predict a precise upper limit for debt ratios".[52] All that can be said with certainty is that if the ratio of public debt to GDP rises rapidly enough over a sufficiently long period, then eventually the government will become unable to continue to fully service the debt and will have to repudiate at least some of it (sometimes repudiation is through outright default; often it is through inflationary reduction of the value of bonds).[53]

The logic of the analysis can be seen in the following equation:

$$d' = p + (r-n)d$$

where d is the ratio of consolidated public debt to GDP, d' is the change in that ratio in one year, p is the ratio of an augmented primary deficit to GDP, r is the annual domestic real rate of interest, and n is the annual rate of growth of real GDP. The augmented primary deficit is the standard primary deficit reduced by seigniorage revenues and earnings on official foreign reserves plus or minus the domestic currency value of the interest differential between foreign currency and domestic public debt.[54] The equation may be interpreted as saying, first, that the growth of the debt depends on the size of the augmented primary deficit, which is that part of government expenditure that exceeds all revenues and needs to be financed by new borrowing; second, that growth of the debt/GDP ratio depends on the rate of interest on already outstanding public debt; and, finally, that while the debt/GDP ratio is made larger by the growth of the debt, it is made smaller by the growth of GDP.

The equation shows, in other words, that the evolution of the debt ratio depends on two main factors: the augmented primary deficit and the difference between the real interest rate and the real GDP growth rate. If the GDP growth rate is greater than the real interest rate, then this will tend to erode the ratio of debt to GDP and there would be room to maintain primary deficits. There have been essentially two types of examples of this relationship. First, it has been the case for some of the rapidly growing economies of Asia, although in the long run their growth rate is expected to slow and ultimately fall below the real interest rate. Second, it was a common phenomenon among many countries in the 1970s and 1980s, when high inflation rates produced negative real interest rates. After inflation was firmly attacked, real interest rates rose and the relationship ceased to hold.

In the long run, in other words, it is expected that the real interest rate will

52 P. R. Masson and M. Mussa, "Long-term tendencies in budget deficits and debt", IMF Working Paper No. 128, December 1995, p. 18.

53 See T. Sargent and N. Wallace, "Some unpleasant monetarist arithmetic", *Federal Reserve Bank of Minneapolis Quarterly Review*, vol. 5, No. 3 (fall 1981), pp. 1-17; and K. Parker and S. Kastner, "A framework for assessing fiscal sustainability and external viability, with an application to India", IMF

54 For a formal derivation of the conclusions to be presented, see Pierre-Richard Agénor and Peter J. Montiel, *Development Macroeconomics* (Princeton, New Jersey, Princeton University Press, 1996), pp. 122-125.

exceed the growth rate of GDP.[55] If the government sought to stabilize the debt/GDP ratio, it would have to ensure that a surplus was run in the augmented primary balance. The primary balance itself would not need to be in surplus if the net contribution to financing from seigniorage and the other augmenting elements was positive, but there would certainly still be a limit to the sustainable primary deficit; in other words, Governments face a definite solvency constraint.

Knowing that there is a solvency constraint, however, is not the same as being able to specify what it is. Some authors have inserted assumed or projected values for GDP growth, real interest rates, government spending and revenues into equations like the one shown above in order to make assessments of fiscal sustainability.[56] Others have noted that the key elements in the equation are not independent; in particular, private saving and investment interact with public policies to determine the paths of interest rates and economic growth.[57] Thus, fully specifying whether a country's budget outlook satisfies the solvency constraint entails specifying a complete macroeconomic model for the country, including a fairly detailed model of the government sector.

In an even more complicated approach, called "generational accounting", some economists have posed the fiscal sustainability issue in a different way. The idea, attractive enough in the abstract, is that current fiscal deficits should not impose undue tax burdens on future generations.[58] The difficulty is in deciding what is "undue" and how large the actual burden is likely to be. Not only must there be a full model of how the economy operates over a long period (including estimates of future growth of productivity), but fairly strict assumptions are needed about household behaviour. A basic assumption made in such analyses is that the public debt should be fully paid off at the end of the stated future time period, when in fact each generation may wish to bequest some risk-free wealth (government bonds) to the next one. Depending on which assumption is used, current deficits may be found to be sustainable or unsustainable.[59]

The complexity of estimating the maximum sustainable deficit does not, of course, relieve Governments of having to decide on the size of the deficit. This perforce leads to simpler policy rules, such as the ones adopted as the Maastricht criteria for government debt and deficit levels needed to gain admission to EMU in 1999 (see box V.2). Sometimes an even more cautious rule-of-thumb might be adopted, such as the United States Government target for reaching a zero federal deficit by the year 2002.

By the same token, when countries adopt macroeconomic adjustment programmes with the support of IMF, a coordinated set of policy measures is agreed, generally including targets for reduction of fiscal deficits. When the financial adjustment programme begins, it is usually clear whether the fiscal deficit is excessive. However, the necessary extent of fiscal contraction is, as argued above, not clear-cut and, indeed, until recently the inclusion of analyses of fiscal sustainability in IMF programme documents was infrequent.[60] This was largely owing to the difficulties inherent in such analyses and the frequently highly judgemental nature of the standards for fiscal sustainability.

55 See S. Fisher and W. Easterly, "The economics of the government budget constraint", *The World Bank Research Observer*, vol. 5, No. 2 (July 1990), pp. 127-142.

56 For applications to OECD countries, see J. C. Chouraqui, B. Jones and R. B. Montador, "Public debt in a medium-term perspective", *OECD Economic Studies*, No. 7, (autumn 1986), pp. 103-153; and O. Blanchard and others, "The sustainability of fiscal policy: new answers to an old question", *OECD Economic Studies*, No. 15 (autumn 1990), pp. 7-36.

57 See, for instance, J. Horne, "Indicators of fiscal sustainability", IMF Working Paper No. 91/5, January 1991.

58 The burden is measured on a net basis, as taxes minus transfers received for social insurance and so forth (see, for example, Alan Auerbach, Jagdeesh Gokhale and Laurence Kotlikoff, "Generational accounts: a meaningful alternative to deficit accounting", National Bureau of Economic Research (NBER), Working Paper No. 3589, January 1991; Hans Fehr and Laurence Kotlikoff, "Generational accounting in general equilibrium", NBER, Working Paper No. 5090, April 1995; and IMF, *World Economic Outlook* (Washington, D.C., IMF, May, 1996), p. 52, and references cited therein).

59 For an extensive discussion of the shortcomings of generational accounting, see William H. Buiter, "Generational accounts, aggregate savings and intergenerational distribution", IMF Working Paper No. WP/96/76, July 1996; see also Willi Leibfritz, "Generational accounting: an international comparison", *Intereconomics*, March/April 1996, pp. 55-61.

60 See S. Schadler, ed., *IMF Conditionality: Experience Under Stand-by and Extended Arrangements*, part II, IMF Occasional Paper No. 129, September 1995, p. 6.

VI GOVERNMENT SPENDING CHOICES AND FISCAL MANAGEMENT

The preceding chapter (chapter V) leads to the conclusion that the role of government in a market economy is being thought about today in the academic and policy literature in a more nuanced way than before. The boundaries are still not sharp between the activities that economists think government must undertake and those that they think it might undertake or believe it should eschew, but the questions that can be posed to decision makers in making the choices are sharper than they were in earlier decades. Also, general policy analysis does little more than narrow the range of overall budget positions that economies can sustain over the long run, leaving considerable room for choices from among sets of feasible spending and revenue-raising programmes. However, Governments do not choose just any set of activities as their economic programme. Economic and social needs and ideas, as well as traditions, create political pressures on Governments to approach policy issues in particular ways. Thus, for example, the economic and social role of the State is and has always been smaller in the United States of America than in countries of Western Europe or Japan. Nevertheless, pressures for fiscal reform in these countries, as in those of the rest of the world, have been taking them all towards smaller government.

The present chapter, while not attempting to be exhaustive, focuses on a selection of the fiscal issues that have been the object of reform efforts in recent years in a large number of developed, developing and transition economies. This chapter highlights how the issues have been addressed in individual countries. The cases scrutinized are not necessarily the pathbreaking ones in a given field, nor necessarily the most prominent in the literature of reform, but they are all cases in which the reform issues have been highly salient politically and where major policy changes have been attempted.

SOCIAL IMPERATIVES, STRAINED RESOURCES

All Governments accept some social responsibilities, but the desirable or feasible extent of those responsibilities is put at issue whenever Governments face fiscal contraction pressures. Two main arguments justify government social expenditure. One is distributional: voters believe in the justice of providing a floor to the well-being of all citizens in their country or, more precisely, providing universal access to certain minimum standards of social services.[1] In some countries, the minimum can be quite generous; but in others, it can be very small.

1 This has been reflected as well at the intergovernmental level; in particular, it is embodied in the Copenhagen Declaration on Social Development, adopted by the World Summit for Social Development, Copenhagen, 6-12 March 1995. (See *Report of the World Summit for Social Development, Copenhagen, 6-12 March 1995* (United Nations publication, Sales No. E.96.IV.8), chap. I, resolution 1, Annex I.)

The second justification for public provision of social services is the market failure argument discussed in chapter V. If left to the market, the extent of education and health services, for example, would be less than what is desirable from the point of view of society as a whole. In health, externalities and the public interest can be very direct, as in the spread of communicable disease. A case in point is the current epidemic of tuberculosis, which could have been prevented but was not (see chapter VIII). This is a case in which people, left to their own devices, have not pursued adequate treatment or screening for a fatal disease, one that they will spread before they succumb to it. Externalities in education involve matters that may constitute less of an immediate question of life and death, but are nevertheless essential: a proper functioning democracy requires an informed citizenry that thinks critically and this requires educated citizens.

Financing and the provision of social services

A public role in education, health or other services does not, per se, indicate how the role should be financed or how the services should be provided. While these services have positive externalities that give the government a motive for assisting in their provision, they are mostly also private goods in that they directly benefit the recipients. They differ from a "public good" (like clean air or security from foreign invasion) for which it is not possible to charge beneficiaries separately for more or less of it and where one person getting the benefit does not exclude another from "consuming" it equally. Education and health care are like standard private goods, where the cost could be borne directly by the beneficiary. Also, when beneficiaries pay at least part of the cost themselves, they tend to use the service in a less wasteful way than when it is provided gratis. For these reasons, it is frequently argued that more of the cost of services such as education and health should be covered by "user fees".

The imposition of user fees, however, raises difficult questions of social justice: that is, if the price is high the poor will not be able to afford enough of the services for the country to attain national social objectives. A compromise is graduated user fees, with the poor paying less than the rich. One difficult question is what the lowest user fee should be. By the efficiency argument, all beneficiaries should pay something; however, for the very poor any payment may be excessive (indeed, even a zero fee may be too expensive for a person on the margin of subsistence, where the opportunity cost of, say, free education is foregoing earning the income that sustains life itself).

Once it is decided to differentiate charges on service recipients, a new group of questions emerges regarding how to make the differentiation, in other words, how to efficiently target subsidies so as to ensure that the full population is served without excessive subsidizing of the less needy.[2] There is substantial literature on targeting assistance on the poor, but no general theory.[3]

In addition to narrow questions of delivering services efficiently (and in a manner that does not demean the recipients), policy planners who take a long-run perspective often want to design programmes that are likely to continue to attract sufficient political support as long as it is needed. To the degree that all households have a stake in a social programme (for example, a national health service or social security pensions), the political support will be larger than if only the poor have a stake in the programme. This also makes for a stronger

2 For an application to food subsidies, see Giovanni Andrea Cornia and Frances Stewart, "Two errors of targeting", in *Public Spending and the Poor: Theory and Evidence*, Dominique van den Walle and Kimberly Nead, eds. (Baltimore, Maryland, Johns Hopkins University Press for the World Bank, 1995), pp. 350-386.

3 "...There is not going to be any general formula here, and much would depend on particular circumstances. I do not doubt that some expert in modern economics would find it helpful to say that targeting should be pushed exactly to the point at which the marginal benefit from it equals its marginal cost. Anyone who is enlightened by that wonderful formula fully deserves that enlightenment." (See Amartya Sen, "The political economy of targeting", in *Public Spending and the Poor: Theory and Evidence*, Dominique van den Walle and Kimberly Nead, eds. (Baltimore, Maryland, Johns Hopkins University Press for the World Bank, 1995), p. 22.)

constituency which can complain effectively when the quality of services is inadequate.[4]

In practice, things can work the other way: under the overall political influence of the middle- and higher-income groups, provision of public social services is sometimes skewed to the perceived needs of those groups instead of to the needs of the nation as a whole or the needs of the poor in particular (examples include excessive spending on sophisticated hospitals instead of clinics and preventive health, highly subsidized higher education instead of technical schools and quality primary education).[5] Indeed, if there is an advantage in a fiscal crisis, it is that the crisis may focus attention on the composition of government spending and make it easier to ask hard questions about what public priorities should be rather than what past government choices revealed them to have actually been. The outcome of such a re-examination, however, need not automatically benefit the poor. It depends on the political dynamics during the crisis.

The challenge of targeting the poor in Ghana

In Ghana, the level of government expenditure on education and health together was under 3 per cent of gross domestic product (GDP) in the early 1980s when a new government came to power after a decade of economic decline. From the beginning of the stabilization and structural adjustment programme that it introduced in 1983 (see chapter VII), the Government included the rehabilitation of dilapidated school and health facilities among its objectives. Despite the demands of fiscal adjustment, Ghana was able to make increases, albeit small, in real current expenditures on social services, partly because of a considerable inflow of foreign assistance and the recovery of government revenues. Then in the second half of the 1980s, with output beginning to grow again, structural reforms in the health-care and education systems began, if with mixed results.

The gravity of the problem facing Ghana has to be appreciated.[6] Half the physicians left the country between 1981 and 1984, and the number continued to decline: from 817 in 1984, the number of doctors fell to 628 in 1989. The number of nurses dropped from 17,748 in 1982 to 8,104 in 1987. In education, teachers had been unable to survive on official salaries under the old regime and many people who were teaching in 1982 were deemed not qualified. The educational system had been starved for textbooks, furniture and supplies and the quality of education was low. Thus, early in the adjustment programme, Ghana sought to raise resources for these sectors.

The Ghanaian Government's concern about the effects of adjustment on vulnerable groups and their threat to the sustainability of adjustment led to the Programme of Actions to Mitigate the Social Costs of Adjustment (PAMSCAD) in 1988. This joint effort with the United Nations Children's Fund (UNICEF) and the World Bank sought to address the basic needs of these groups in heath care, education and water supply. The programme suffered, however, from inadequate funding, and poor management and coordination, and it was always treated as an ad hoc set of projects rather than as an integral part of the adjustment programme. It was also never more than a tiny programme, even by the standards of a relatively small country.[7]

Nevertheless, combined with its other efforts, Ghana raised the share of social expenditures in GDP to 6 per cent by the early 1990s, a doubling since

4 However, when the quality of service deteriorates beyond a certain point, people who can will opt out of the public programme for private suppliers (in any case, the argument about designing inclusive constituencies generally leaves out those highly affluent people who opt out of the public system anyway, for reasons of exclusivity as opposed to concerns about quality).

5 See, for example, Nancy Birdsall and Estelle James, "Efficiency and equity in social spending: how and why governments misbehave", in *Including the Poor: Proceedings of a Symposium Organized by the World Bank and the International Food Policy Research Institute*, Michael Lipton and Jacques van der Gaag, eds. (Washington, D.C., World Bank, 1993), pp. 335-358.

6 The following draws on information from the Republic of Ghana, the United Nations Children's Fund (UNICEF) and the World Bank; see also, James Cobbe, "The political economy of education reform in Ghana", in *Ghana: the Political Economy of Recovery*, Donald Rothchild, ed. (Boulder, Colorado, and London, Lynne Rienner Publishers, 1991), pp. 101-115; Paul Glewwe, "The relevance of standard estimates of rates of return to schooling for education policy: a critical assessment", *Journal of Development Economics*, vol. 51, No. 2 (December 1996), pp. 267-290; Victor Lavy, "School supply constraints and children's educational outcomes in rural Ghana", *Journal of Development Economics*, vol. 51, No. 2 (December 1996), pp. 291-314; and two World Bank reports: "Ghana: growth, private sector and poverty reduction, a country memorandum" (Report No. 14111-GH), 15 May 1995 (especially pp. 37-46), and "Ghana: poverty past, present and future" (Report No. 14504-GH), 29 June 1995.

7 The target was to spend $85 million over two years; but as of 1990, only 8 out of 23 projects had made "good progress" (Overseas Development Institute, "Adjustment in Africa: lessons from Ghana", Briefing Paper No. 96(3), July 1996).

the decade began, but a figure below the level of the mid-1970s. A disproportionately small share of the spending, however, went to services for the lower-income population. Ghana Living Standards Surveys showed that the poorest 20 per cent of the population received only 12 per cent of health spending in 1989 and only 11 per cent in 1992. In education, the poorest 20 per cent were the beneficiaries of 17 per cent of Government spending in 1989 and 16 per cent in 1992. Moreover, enrolment rates in primary education in 1992 were 26 per cent lower for the poorest fifth of the population than for the richest fifth.

Part of the problem was embedded in the funding of these expenditures. Besides general budgetary support, fees were raised or imposed for some education and health services. These applied to all segments of the population, although the increases were higher for those items used more intensely by higher-income groups. That applied, at least, to the official prices. However, Ghana's survey data found that in 1992 households were paying tuition for publicly provided education that was supposed to have been free.[8] There is also evidence that rural populations and the poor in particular were paying more for health services than people in urban areas, perhaps because of extralegal fees and unfamiliarity with the correct fees.

Part of the problem entails general questions of targeting assistance noted earlier. While cost recovery through user fees can play a role in financing part of the expenditure increases that are needed, it is not deemed appropriate by the Government of Ghana (and many others) for primary school tuition.[9] Moreover, cost recovery for education and medical care without quality improvements would be counter-productive: the poor will not struggle to pay fees for services in which they lack confidence. Without question, improvements have been made in Ghana since the early 1980s. There is, however, still so much distance to cross.

The distributional consequences of regional devolution in China

While China has enjoyed a long period of very high rates of economic growth, it has had to focus specific policy attention on mobilization of resources for social programmes.[10] Owing to economic reform and fiscal decentralization (see chapter VII), government financing of social services diminished significantly as a share of total output beginning in the early 1980s. As revenues of the central Government did not keep pace with the rise in GDP, there was a corresponding relative decrease in budgetary expenditure and thus in the capacity of the centre to redistribute resources. Central government expenditure on education fell from 3.1 per cent of GDP in 1985 to 2.4 per cent in 1994, while health expenditures stagnated (3.5 per cent of GDP in 1985 and 3.3 per cent in 1994).

Before the reforms, education was financed from central allocations and the distribution of educational resources was thus centrally determined. With relatively less central resources, the financing of education in China has come to rely increasingly on user fees and local government funds. This has increased the financial burden on poor households and therefore reduced their access to education. Moreover, with local government funds becoming more important, regional disparities in educational spending have grown – the regions with the lowest income also have the lowest per capita government expenditure on education and the highest private fees. This generates a vicious cycle: low income

8 World Bank, "Republic of Ghana: basic education sector improvement programme" (Report No. 15570-GH), 24 May 1996, p. 13.

9 For a critical view of school fees for primary education in Ghana and other low-income countries, see Sanjay Reddy and Jan Vandemoortele, "User financing of basic social services", Evaluation, Policy and Planning Working Paper, UNICEF, 1996.

10 This discussion draws, in particular, on World Bank, *The Chinese Economy: Fighting Inflation, Deepening Reforms*, vol. II (Washington, D. C., World Bank, April 1996), Annex 2.

causes low education spending, which results in slow income growth and continued low income.

A similar pattern can be found in China's health expenditures. With economic reform, the structure of the health-care system shifted towards increased reliance on insurance schemes and user fees. Since the dissolution of rural communes in the early 1980s, rural collective funding of health care has been drastically reduced and health care in rural areas has increasingly relied on user fees. As a result, government-financed health care has become concentrated on the urban population, particularly government employees and a small minority of the rural population.

More generally, poverty alleviation remains a pressing concern in China. Partly, this has been a consequence of decentralization, as noted above, and indeed the central government has since increased expenditure on poverty alleviation programmes targeted at poor regions and populations. In addition, however, the flow of migrants to the cities looking to share in China's economic dynamism has overwhelmed the capacity of the urban areas to absorb new workers. As a result, a group of poor, underemployed migrants has emerged, which has added a new dimension to the poverty problem.

All in all, a more equitable level of social welfare services requires increased activity by the central government in its redistributive function. Increased central assistance will be needed, for example, if China is to achieve its goal of universal access to good-quality basic education by the next century. In health care, extension of coverage of the insurance system beyond government and state enterprise employees or some other form of financing and provision of services will have to be devised.[11]

Public services and market-oriented reforms in New Zealand

That social services are supplied in appropriate amounts to the appropriate people is very much a concern in developed as well as developing countries. Resources may be less scarce, but the public nevertheless demands that the resources – their tax revenue – be well spent. In New Zealand, for example, after a substantial increase in government social expenditures in the early 1980s, the emphasis of public policy shifted to comprehensive deregulation and fiscal consolidation.[12] Concern was also raised about the effects of the tax system and social welfare programmes on work incentives. When a new Administration came into office in 1990, it strengthened market-oriented reforms that had begun in the 1980s and proceeded to base fiscal consolidation on the control of expenditure, primarily in the social welfare area.

In education, the Government ended free tertiary (university) education and instituted fees, but also offered means-tested financial assistance and more general access to education loans. Competition among universities in the provision of education was also heightened: public funding is allocated to universities based on the number of registered students and courses. In health care, the Government's role as a direct provider of services has been substantially reduced, while that in funding and administration of the nationwide health-care system has been maintained. To date, however, no significant improvement has been observed in the efficiency of the provision of these services.[13]

New Zealand's reform of social expenditures has gone beyond introducing user fees. Expenditures on the unemployment insurance programme have been

11 The benefits of such advances will extend beyond the direct services provided: one of the constraints on the speed of the reform of state enterprises is that they have been the primary provider of social services to urban workers.

12 The full reform programme was reviewed in Lewis Evans, Arthur Grimes and Bryce Wilkinson, with David Teece, "Economic reform in New Zealand 1984-95: the pursuit of efficiency", *Journal of Economic Literature*, vol. XXXIV, No. 4 (December 1996), pp. 1,856-1,902; see also, Marco Cangiano, "Accountability and transparency in the public sector: the New Zealand experience", IMF Working Paper, WP/96/122 (November 1996).

13 For details, see Organisation for Economic Cooperation and Development (OECD), *Economic Surveys: New Zealand* (Paris, OECD, 1996), pp. 114-121.

reduced by applying stricter eligibility criteria and lowering the income-replacement ratio. Welfare payments to single parents and the sick and disabled have also been cut. At the same time, several unemployment assistance programmes directed at the long-term unemployed have been launched, providing retraining and employment services.

There is some indication that the distribution of household income became more unequal from 1988 to 1995, reflecting the wide-ranging reduction in social welfare benefits.[14] There has also been a political reaction to the sharp reduction in social expenditures. While the 1996 election results showed continued public support for fiscal consolidation in general, there was also support for some increase, however modest, in social expenditure.

[14] The average weekly income of the highest quintile of households was about 3.35 times that of the lowest quintile of households in fiscal 1988/89 and rose to about 3.5 times that of the lowest quintile in fiscal 1994/95, based on data of Statistics New Zealand, "Household income and expenditure survey", *New Zealand Official Yearbook*, various issues.

Cost containment and a smaller safety net in the United States of America

In the United States, public expenditure for social welfare entitlements – including the retirement income programme, health care for the aged and various means-tested programmes – increased from 5.4 per cent of GDP in 1968 to 11.2 per cent in 1995. Two factors in particular have been behind this trend: rising life expectancy, which raised outlays for the aged; and the rising incidence of single parenthood, which greatly increased the numbers eligible for anti-poverty assistance. In addition, soaring medical costs have led to the sharp increase in public health care expenditures for the poor and the elderly. At the same time, the very strong public support in the last two decades for public income for retirees and the disabled – in which the bulk of the population has a direct stake in one form or another – has made it politically difficult to curtail the growth of such expenditures, let alone scale them back.

Nevertheless, with agreement of the two major political parties to balance the federal budget by the year 2002, coupled with pledges to cut taxes, the political focus has turned to social entitlement programmes as the area that can yield the largest amount of expenditure reduction. Unprecedented reductions in the growth of outlays for health-care programmes have been proposed, while the overhaul of social assistance programmes for the poor has begun. Besides reducing government expenditures and government's role as provider of these services, these new policies reflect a smaller area of political consensus on the redistributive role of government than in earlier decades.

The Welfare Reform Bill enacted in August 1996 ended a six decade-old federal guarantee of aid to the poor. In the past, unlimited federal grants to state and local governments matched those governments' outlays on public assistance programmes. This is being replaced with block (lump-sum) grants, which give the States considerable leeway with respect to programme assistance. Since the aim is to reduce overall funding, States will have to make hard choices in allocating their limited grants. States already differ in their capacity and desire to increase spending on welfare and the differences may become accentuated. Moreover, if more people than expected need support after the grants have been allocated, the fact that States and localities will have to bear the full incremental cost may just mean non-provision of full services to all who need them. In addition, maximum time limits have been set for receiving federal income support benefits, with a view to eliminating a so-called culture of dependency. There are some measures for job training, but it is uncertain

whether there will be enough jobs for which former welfare recipients are competitive candidates. In addition, one year after loss-of-income support, eligibility for federally funded health care for the poor is lost, leaving state or local government or private charities to pick up the slack. In short, the new system shrinks the social safety net for the poor.[15]

15 This refers, in particular, to the non-elderly and non-disabled poor (see OECD, *Economic Surveys: United States* (Paris, OECD, November 1996), p. 115).

Social services in transition: the Russian Federation and Hungary

In the countries undergoing economic transition, entirely new systems of financing and provision of social welfare have been needed. Under central planning, many social programmes had been organized at the level of state enterprises, although funding was allocated from the central government budget. New service delivery and new funding systems were thus required.

In the Russian Federation, central funding shrank during the general disarray accompanying the early years of transition. Moreover, while new modes of service delivery had to be developed, additional demands for social benefits arose because of the dislocations of transition itself, as reflected in worsening health statistics. Data indicate, however, that employment in health and education has been stable; taken together with many instances of considerable overstaffing, this suggests that significant restructuring in the provision of services has not yet occurred.[16]

16 See M. Horton, "Health and education expenditures: Russia, the Baltic States and the other countries of the former Soviet Union", IMF Working Paper, No. 96/126, Washington, D.C., 1997.

The social consensus in the Russian Federation still maintains that government should be the provider of social welfare. To date, the federal Government remains the principal provider, but its ability to play this role is restricted by the severe limits on fiscal resources. Social welfare spending remains the largest item in the central budget, constituting 26 per cent of total expenditure or over 7.5 per cent of GDP in 1995. In addition, the Parliament continues to proliferate unfunded entitlement commitments that add to the burden of the central Government. Meanwhile, the planned devolution of responsibility for social spending to local governments has not yet taken place, as many local governments lack access to adequate revenues to underwrite such expenditures.

Moreover, the effectiveness of social welfare spending in directing government resources to the needy remains very low, as government social programmes are in general not explicitly targeted; instead, there is a high reliance on an overall subsidy of the cost of providing services. A shift to user fees and employer contributions to complement government financing has been initiated but is progressing slowly. Introducing and establishing the mechanisms, procedures and institutions for this new approach take time even in the best of circumstances.

In Hungary, restructuring of the social welfare system began with the start of transition and aimed to give the State a less dominant role in financing and administration. Instead of applying annual resources from the central budget, as under central planning, the Government established two insurance funds, one for health care and the other for pensions, as discussed below. The funds were organized as separate and independent entities, with their own boards consisting of representatives of beneficiaries and employers. Other non-insurance benefits, such as child benefits, supplementary pensions and other transfer payments, were retained as the responsibility of the central budget.

However, despite the intent to reduce the role of the State in social welfare, the level of current expenditure has risen. The newly established health insurance fund has been in growing deficit since 1991, owing to rising outlays for

health-care costs and arrears in enterprise contributions. In the end, the Government has had to make up the deficit. More generally, Hungarian government expenditure for social welfare purposes rose from 13 to 19 per cent of GDP between 1990 and 1994. However, expenditures have shifted significantly towards means-tested payments and subsidies to households for the maintenance of their standard of living, since generalized consumer price subsidies have been cut back severely.

The case of old-age pension reform

Social pensions for the elderly are major government income-transfer programmes in developed, transition and some developing countries.[17] The government need not be the exclusive provider of these schemes, as many individuals would in any case seek to buy "contracts" to smooth their income over the life cycle. Indeed, such schemes are available from insurance companies in many countries in the form of annuities. In these plans, a person pays premiums over a period of years in exchange for regular payments beginning at some future time of retirement, and continuing until his or her death. Similar income-smoothing pensions, paid for out of the wage bill, are often provided on a group basis by employers for employees.

Governments become involved in provision of old-age pensions because the market supply alone would be inadequate on two fundamental counts: coverage of the population would be too small and cost would be too high. The reasons for the market failures involve both the "adverse selection" problem in insurance markets noted in chapter V (would men "subsidize" the annuities of longer-lived women?) and the unit cost savings (economies of scale) that are available when a mandatory programme covers an entire nation. In addition, private insurance companies generally cannot offer policies that guarantee that the value of the pension will not be eroded by unforeseen inflation.

Governments also introduce such programmes because of the opportunity they afford to redistribute incomes, the elderly being in many countries among the lower-income strata of the population, especially in the absence of their old-age pension. Many old-age pension schemes are financed by Governments, in effect, as transfers from the working population to the retired population, in contrast to the life-cycle income-smoothing schemes that arise in the private sector. They are thus an instance of the income redistribution function of government. However, government operation of pension schemes for the elderly has a further justification, namely, as a "merit good". This essentially reflects the argument that individuals left to themselves would not act in their own best interest and that government therefore needs to intercede to ensure that they provide for their old age.[18]

Considerable interest has recently arisen in changing the old-age pension schemes so that they are no longer mainly inter-generational transfers, but instead become mainly mandatory savings schemes. This is already largely the case in a few countries, but more are considering the change. If they were to make the change, the distributional element would be removed from their programmes and their continuance as government activities would have to be defended on the other bases.

In other words, some countries have converted their social pension schemes

17 The term "social security" is sometimes used to denote old-age pensions, the focus of the present discussion, but it often denotes a larger class of social policies in which the government provides a form of socialized insurance against loss of income from various uninsurable or partly insurable contingencies (unemployment, disability, dependent survivors and so on). Old age is commonly listed among the contingencies, although, as noted in the body of this chapter, the income transfer aspect of old-age pensions is especially important. For a more complete treatment of the subject, see *Sustaining Social Security* (United Nations publication, Sales No. E.97.IV.3).

18 Some argue that this reflects another case of market failure called "moral hazard", whereby individuals might not provide for their old age because they feel confident that society will not let them starve; thus government averts such behaviour by making participation in old-age pension schemes mandatory.

for the elderly from largely "defined benefit" schemes to mainly "defined contribution" arrangements. In the former case, the government stipulates the rules that determine how much retirees are to receive and taxes are set on the working population and on enterprises (in some countries) so as to produce the requisite resources.[19] In the latter, employees and employers (in some cases) contribute a pre-set but mandatory share of income to a savings scheme and employees reap however much their savings will have earned by retirement.[20]

The question then is, if social security for the aged becomes only a savings plan, how strong is the case for government to remain involved at all? One answer could be that the government needed to play a direct role because the financial system in the country was not adequately developed (a market failure argument), and thus appropriate savings vehicles were not available. Under this argument, the government might withdraw from the activity once the financial system developed adequately. The government would still supervise the private pension schemes to ensure that they were soundly run, to enforce payments to the funds and to ensure that higher-risk individuals were not discriminated against; but it would not have to operate the scheme directly. Even here, the government enforcement of employee contributions (forced saving) would be justified only on merit-good grounds (as overcoming myopia). In any event, these questions will begin to arise as some of the reform plans are designed.

19 If the pension scheme ran out of funds, the retirement obligations of the government would have to be met out of general tax revenues.

20 Since the earnings of the savings of the poor are typically small, their retirement income is usually supplemented by a traditional transfer.

United States

The Social Security System in the United States is faced with a surge in future pension obligations because of the ageing of the population. The system is a defined-benefit programme financed by payroll taxes imposed on employers and employees. Benefits are based on earnings levels and the number of years of contributions and are indexed to inflation. It is funded mainly on a "pay-as-you-go" basis, taxing current workers and employers to pay current pensioners. However, given the rising share of retired people, Social Security taxes also embody a savings component: it operates a surplus at this time so that it will accumulate resources for the future when the number of workers per retiree will be smaller. Based on demographic projections, Social Security is currently underfunded in relation to its future obligations.

More precisely, under current law and the projections of the Trustees of the Social Security System, revenues from contributions and income taxes on pension benefits will exceed programme outlays only until the year 2011. After 2018, outlays will exceed tax revenue and the interest income on holdings in all Social Security trust funds. The trust funds themselves will be exhausted in 2029. After that, either payments will have to be reduced or other revenues supplied, eventually covering about 30 per cent of programme benefits. Therefore, there is widespread agreement that the existing system needs to be reformed. How this is to be accomplished remains the subject of a major political debate. According to the Council of Economic Advisors to the President:

"A variety of approaches should be considered, but any possible changes must also ensure that the benefits of reduced poverty and increased economic security for the aged and disabled are not put at risk."[21]

Three major approaches, each with different means of financing, methods of investment of funds and levels of benefits, have been identified by the Presidential Advisory Council on Social Security.[22] Importantly, one of the options,

21 United States, Council of Economic Advisors, *Economic Report of the President* (Washington, D.C., February 1997), p. 117.

22 For a discussion of these results, see E. Gramlich, "Different approaches for dealing with Social Security", *Journal of Economic Perspectives*, vol. 10, No. 3 (summer 1996), pp. 55-66; and Peter A. Diamond, "Proposals to restructure Social Security", *Journal of Economic Perspectives*, vol. 10, No. 3 (summer 1996), pp. 67-88.

the "Maintenance of Benefits" proposal, would make several relatively minor modifications in taxation, indexation of benefits for inflation, extension of workforce coverage and management of the trust-fund portfolios, and thereby make up the funding shortfall. In that regard, the United States system is not gravely overextended and can be fully secured. Other options entail adding variations of the savings schemes (defined-contribution pensions), as noted above. The choice between the different systems will involve trade-offs between individual and government responsibility, transfer of income between generations and risk and reward of alternative investment instruments for Social Security funds. Also, the popularity of and reliance upon the current system can be expected to constrain the changes that will be politically acceptable.

Japan

In Japan, as the culmination of many years of structural change in the economy, the public pension scheme's funding has been brought into the forefront of public debate. First, the old-age dependency ratio – the ratio of those aged 65 years or over to those between ages 15 and 65 – increased from 10.2 per cent in 1970 to 13.5 per cent in 1980 and 17.3 per cent in 1990. Social security expenditure – including public aid, social welfare, social insurance, public health and medical care, and medical services for the elderly – rose from 4.6 per cent of GDP in 1970 to 11.4 per cent in 1990 (see figure VI.1). Of this latter figure, about 40 per cent was for pensions.

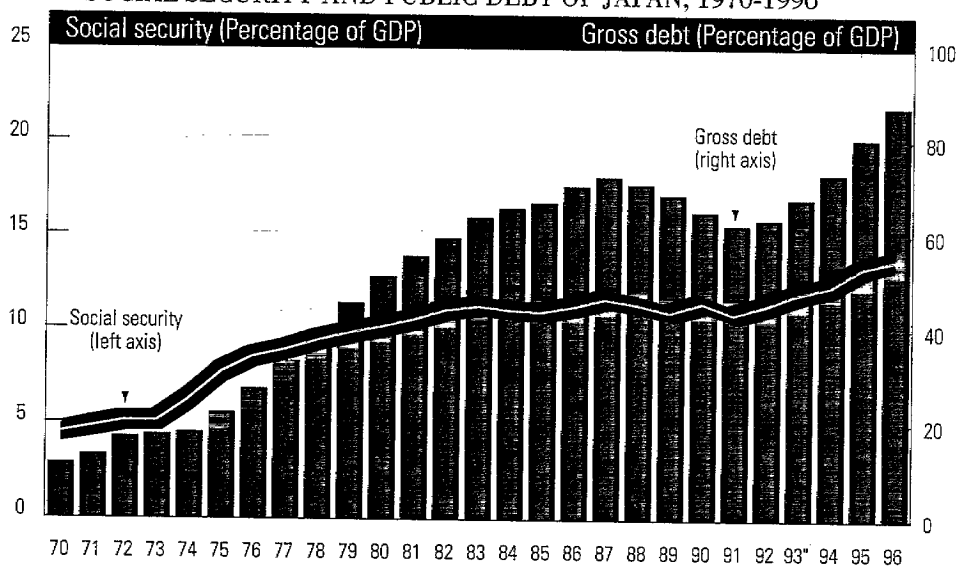
Second, the long-run growth rate of Japanese real GDP has apparently slowed again: the 10 per cent annual average growth rates in the 1960s were replaced by 4 per cent a year averages in the 1970s and 1980s and even those growth rates now appear high by the standards of the 1990s (see table A.2). Slower growth of GDP meant slower growth of tax revenues, while under the heavy pressure to sustain spending on various programmes, the ratio of gross public debt to GDP rose from 11.1 per cent in 1970 to 51.2 per cent in 1980 and kept rising in the 1980s (see figure VI.1).

It was, in other words, apparent more than 15 years ago that the rate of increase in public debt was not sustainable, especially as the population was forecast to continue to age rapidly, reducing its contributions to tax revenues while increasing its drawing from social insurance programmes. Fiscal adjustments were thus made in the 1980s, which began to take effect in the later years of the decade, along with the revenue boost from temporarily more rapid GDP growth and from asset inflation in the buoyant financial markets. The debt-to-GDP ratio peaked at 72.5 per cent in 1988 and began to decline, although anti-recessionary programmes in the 1990s have sent the ratio to almost 90 per cent of GDP in 1996 and higher levels are expected in future years.

The concerns that shape the outlook and policy agenda today are thus the same as in the early 1980s. The debt-to-GDP ratio is growing unsustainably, while the dependency ratio is expected to climb to 25 per cent in the year 2000 and reach 50 per cent in 2050. Coupled with the continued slow growth of the Japanese economy over the long term, this ageing of the population could put considerable pressure on the fiscal balance and public debt.

With this in view, the Government in 1994 reformed the two major public pension schemes that together cover over 85 per cent of the social security system, namely, the National Pension Scheme (which provides a basic pension to

Figure VI.1.
SOCIAL SECURITY AND PUBLIC DEBT OF JAPAN, 1970-1996



Source: Data of OECD, *Economic Outlook*, December 1996.

all citizens) and the Employees' Pension Scheme (which provides earnings and contribution-related pensions to private-sector employees). The reform consisted of three major changes that are common to many pension plan reforms: contribution rates were increased, the eligibility age was raised (from 60 to 65) and the growth rate of benefits was cut (by indexing them to the more slowly growing after-tax income instead of to gross income). These changes were forecast to ensure the long-term sustainability of the scheme, on the condition that the Government raised its contributions to social security financing from 1.25 per cent of GDP in 1995 to about 2 per cent in 2020.

However, this will not itself solve the problem. Under current fiscal spending projections, including for the social security system, the tax burden would have to rise above 50 per cent of GDP in 2025.[23] This would require sets of taxes that appear likely to have significant disincentive effects, with economic growth suffering as a result. In order to keep the tax burden on the national economy below 50 per cent and maintain fiscal balance over the long term, the Government will have to consider not only further adjustments in the pension schemes, but, more generally, also the composition of fiscal expenditures and revenues.

Some Japanese authors are beginning to ask a more challenging question: Will Japan continue to need for many decades into the future the pay-as-you-go social security system of which it has been proud? The system has made inter-generational transfers so as to improve the distribution of wealth among generations. In the decades when the younger generation enjoyed considerable benefits from the economic prosperity built on the accumulation of past economic activities, the older generation was not affluent enough to accumulate sufficient wealth to adequately support its life after retirement. As a result, a wide gap in lifetime earnings between the two groups was observed. At present, however, medium-term economic growth in Japan is much lower than in the past, the gap in lifetime earnings among generations is not expected to be

23 See Japan, Ministry of Health and Welfare, *21 Seki Fukushi Vision* (The Vision for the Welfare System in the Twenty-first Century), March 1994.

large and the per capita income of the current young generation is reasonably high. Some view this as sufficient economic and social reason to shift to a fully funded pension system managed by private agents. The role of the Government under such an economic and social environment could be restricted to guaranteeing a minimum standard of living and to regulating and supervising private pension funds. Indeed, certain other countries have already begun to move in this direction.

Argentina

Argentina faced a crisis in its public pension system in the 1980s, when the real value of pensions fell by over 50 per cent. The Government that came into office in 1989 began a broad series of reforms in monetary and fiscal affairs (see chapter VII). One part of the reforms, introduced in 1993, was a major make-over of the public pension system.

The difficulties of the system in the 1980s stemmed in part from repeated bouts of high inflation, declining real wages and falling employment, which undermined the value of contributions. At the same, rising life expectancy and low retirement ages added to the pay-outs from the system, leaving it with growing financial imbalances. Widespread evasion of contributions was also a major impediment to keeping the system viable.

The reform entailed replacing the old system with a new pay-as-you-go structure that contained different benefit, contribution and pay-out criteria, combined with a new scheme based on individual "capitalization" accounts. The sums accumulated in the latter are invested in either a government fund or one of a number of approved private funds. All of the latter are highly regulated and include limits on the composition of the portfolios of securities in which they invest the workers' savings. The object is to reduce risk through adequate diversification and avoidance of excessively risky investments (although some equity investment is permitted).

The system as a whole is financed by taxes on employers and workers. Employers and self-employed workers contribute 16 per cent of gross salaries and incomes, respectively, to the pay-as-you-go system. In addition, all workers contribute 11 per cent of their earnings. If they wish to remain in the old system, the full amount goes into the pay-as-you-go system, adding to their "defined-benefit" pensions; alternatively, they may place their funds in the public or one of the private pension schemes and have the earnings on those funds determine the corresponding part of their pension.

The Government established a new public institution to be responsible for collecting all social security taxes, with the aim of decreasing the cost of collection through economies of scale. In addition, it increased the minimum period of contribution from 15 to 30 years and raised the earliest retirement age to 65, which slows the increase in the number of pensioners. Moreover, the traditional component provides a smaller universal pension than in the past, covering about 28 per cent of average salary after at least 30 years of contribution.

Certain transitional measures were also required. First, before launching the new system the Government floated a special bond issue to clear about $10 billion in arrears of the previous fund. In addition, it earmarked general tax revenues to cover net outlays in the early years of the new pay-as-you-go programme, when retirement obligations would exceed the new levels of tax

receipts. The supplementary tax revenues were necessary because public pension payments had grown to more than 40 per cent of current government expenditure, double the level of the early 1980s. Employers' and employees' contributions covered only two thirds of these payments; the rest was covered by general tax revenues.

The new system has started rather successfully. About 65 per cent of covered workers have chosen to participate in the mixed system, meaning that more than just new entrants into the labour force are choosing this option: a large proportion of existing workers are switching to the new scheme as well. Financially, and contributing to the support for the scheme, the first year's results were extraordinary: the real yield on the new pension funds was 17.8 per cent in 1995.[24] The amount accumulated in these funds at the end of that year totalled $2.5 billion, equivalent to 0.9 per cent of GDP.[25]

Hungary

Hungary, like the other economies in transition, is developing a public pension system for a decentralized and market-oriented economy. It has had a single pay-as-you-go system since 1949, when the Government took over three limited and insolvent pre-war funds. During the period of central planning, the pension fund was extended to the full workforce and benefits were increased, although the Government had difficulty maintaining the real value of its pension commitments, especially once inflation rates began to rise in the late 1980s.

The recent period of pension reform began in 1991 with the introduction of regular indexation instead of periodic legislation to raise nominal pension benefits and taxes, and new methods were introduced for calculating benefits. The net effect was to reduce the average "replacement rate" of pension benefits to 53 per cent of previous earnings in 1993 from 64 per cent in 1990 (itself down from earlier years).

The new public pension fund was removed from the central government budget in 1993 and is now organized as an independent insurance fund under the control of the Board for Pension Insurance and its agencies. The Board comprises representatives of beneficiaries and employers who contribute to the fund. Payments to the fund are mandatory for employers, workers and the self-employed.

The fund has nevertheless been struggling with substantial deficits owing to both lower-than-expected contributions and an unexpectedly large increase in claimants. Employers have been evading payments by shifting to remuneration that is not subject to contributions and an increasing number of workers have salaries that exceed the individual earnings ceiling for obligatory contributions. Bankruptcy and liquidity problems also reduce employer contributions. At the same time, rising unemployment has caused a surge in early retirement and claims for disability retirement, putting pressure on pay-outs.

As a consequence, the fund became illiquid and despite its having been established only in 1993, the Government has already had to assume debt incurred by the fund to finance deficits of previous years. More recently, the Government has had to extend loans to the fund to maintain its liquidity. Thus, before the new system can be viable and operate independently of the government budget, additional adjustments appear to be required, for example, in enforcing contributions and setting their levels, as well as in determining conditions of eligibility for benefits.

24 This was a reflection of the very high interest rates that were one aspect of the credit crunch created by the central bank's acting as a currency board when capital fled the country after the Mexican balance-of-payments crisis erupted.

25 See A. Arenas de Mesa and F. Bertranou, "Learning from social security reforms: two different cases, Chile and Argentina", *World Development*, vol. 25, No. 3 (March 1997), pp. 329-348.

One observer placed the pension problem squarely in its political context:

> "In sum, we now have a pension system in Hungary that does not satisfy anyone. Low-income pensioners are deprived because they are practically starving. Pensioners in the higher pension brackets...are deprived because they justly feel they have been robbed of the fruits of a long life dedicated to work. Business and international financial institutions are outraged because they consider the system too expensive. It is thus generally agreed that a complete overhaul of the pension system, a radical reform to be codified bya comprehensive new pension act, is unavoidable. How, when and in what form this can be achieved is of course much debated."[26]

Indeed, a new social security law which would incorporate a mixed defined-benefit and defined-contribution system, was expected to go before the Hungarian Parliament in May 1997.

[26] Maria Augusztinovics, "Gestation and retirement financing applied to Hungary" (chap. VII), in *Sustaining Social Security* (United Nations publication, Sales No. E.97.IV.3), p. 159.

SOME SHARPLY REDUCED EXPENDITURES

In most political discussions of social spending reductions, the cutbacks are presented as unfortunate necessities. Very few indeed are the officials standing for election who would proudly state that they tore a hole in the social safety net. Rather, they plead that financial stringency forces them to take economy measures and prompts the search for more efficient ways to meet their social obligations (in the end, they may well be proud of the efficiency gains). The tone and content of discussion about some other reductions in government spending are completely different. A prime example of this occurs when an easing of international or civil tensions allows the country to reduce military spending. A second case concerns reducing the direct economic role of the State, for example, through privatization of state enterprises. In these latter cases, officials hold out the prospect of greater economic activity with more benefits to the rest of the economy (more foreign exchange from privatized mining, better service from privatized utilities and so on). It is, in effect, an admission either that state involvement was originally a mistake or that the reasons that once justified state involvement no longer apply.

Reducing the scope of public enterprise

As discussed in chapter V, dissatisfaction with state enterprises in directly productive activities grew to permeate the mainstream view in developed, transition and developing countries. Observers highlighted state-enterprise inefficiencies, which were attributed to lack of competition, absence of incentives to perform better and "soft budget" constraints (in which the government budget could be relied upon to cover losses with subsidies). In some developing countries with relatively stagnant economies, part of the blame for their difficulties was put on the poor performance of the state enterprises that dominated in manufacturing and infrastructure.

If state enterprises were thus increasingly seen as "part of the problem", privatizing them was only part of the solution. One of the problems in developed, developing and transition economies was that, besides being asked to supply a good or service efficiently, state enterprises were performing a variety of other functions, such as employment creation or protection, social service

provision and other redistributive tasks. Thus, privatization meant that other means would be needed to meet the social goals.

In addition, the role of government in the entire process of privatization has to be substantial. The privatizing government will usually want to obtain the best price possible for the assets being privatized, although sometimes capitalizing on the political opportunity for quick action may take precedence over having protracted negotiations over the best price. In any case, evaluating the worth of the assets is a complex task and one that is not independent of complementary policies of government. Certainly, one lesson derived from the experience of the *Treuhandanstalt* (Treuhand) in selling the state enterprises of the former German Democratic Republic after its reintegration into the Federal Republic of Germany is that the exercise can be quite costly.[27]

Privatizing Governments have also had to develop the capacity for indirect oversight, administration and regulatory enforcement. Typically, the idea in privatizing, say, the local telephone company was not to exchange an inefficient state enterprise for an unregulated monopoly. However, regulation can entail a highly technical set of legal practices in which contending interests (purchasers and the supplier) vie for influence over the regulatory authority. As in other areas of government, this requires a well-trained and adequately remunerated civil service and an effective public oversight of government itself.

27 See *World Economic and Social Survey, 1996* (United Nations publication, Sales No. E.96.II.C.1 and Corr. 1), chap. VI, sect. entitled "The experience of the *Treuhandanstalt* (Treuhand) in Germany".

Cases of privatization

While it has affected all groups of countries, the privatization movement has been greatest, naturally, in the transition economies, where it has been a major component of the process of transformation from an administrative to a market-based system and a means of generating revenue while reducing government expenditure on subsidies to loss-making enterprises. The early lessons of this movement have broad applicability.[28] In particular, the establishment of an appropriate legal framework for privatization and enforcement has been a central requirement for success. It is also found to be important that privatization policies lead to appropriate corporate governance structures that are conducive to appropriate market-oriented enterprise behaviour. Measures to promote and safeguard competitive conditions were found to be essential where markets were distorted, particularly in cases where, for example, large privatized enterprises could monopolize the market.

28 See *World Economic and Social Survey 1995* (United Nations publication, Sales No. E.95.II.C.1), chap. VI, sect. entitled "Ownership and efficiency: how enterprises behave", for a discussion of ownership and enterprise behaviour in transition economies and its policy implications.

In the case of the Russian Federation, the proceeds from privatization of state enterprises were consistently less than the amounts expected, based on budget forecasts. It had been recognized that receipts would be below potential because of transaction costs and the difficulties in valuing assets when markets were not fully functioning. Moreover, because of the desire to sell to domestic investors, prices were set relatively low and account had to be taken of the liquidity constraints of potential buyers. The limitations on the share of an enterprise that foreign investors could own further restricted the number of potential buyers. Because of the dearth of buyers and to protect employment, particularly in unprofitable enterprises, restructuring of enterprises before privatization became necessary. This has entailed the use of government funds and sometimes also involved the payment of arrears in inter-enterprises debt.[29]

Argentina provides an example of a very different privatization exercise. Political momentum for privatization of public enterprises grew with the enact-

29 See Adrienne Cheasty and Jeffrey M. Davis, "Fiscal transition in countries of the former Soviet Union: an interim assessment", IMF Working Paper, June 1996, pp. 6-7.

ment of the Law of Reform of the State in 1989 (see chapter VII). As part of the broader programme to redefine and reduce the role of the State in the economy, which included the pension reform noted above, a vast privatization programme was undertaken that aimed to cut the fiscal deficit, increase industrial competitiveness and stimulate foreign investment inflows. It was implemented in the context of an overall deregulation of domestic markets and liberalization of trade.

With strong political consensus behind it, the Argentine Government was able to implement its programme with remarkable speed. The result was that almost all the state enterprises were privatized in less than four years, covering the telecommunication, transport, defence, power, oil and reinsurance industries. Revenues from the programme amounted to approximately $26 billion between 1990 and 1993, paid with a combination of cash, investor redemption of Argentine public debt and transfer of liabilities.[30] There were, however, significant negative aspects of the programme, most notably the loss of over 100,000 jobs. Also, according to some critics, the speed of the privatization process resulted in underpricing of assets and a lack of transparency of divestiture procedures, at least as far as the earliest privatization cases were concerned.[31]

A privatization process began in Ghana in the late 1980s, after adjustment policies had been in place for several years (see chapter VII). The Government encountered unexpected problems, however, such as large inter-enterprise debt and inadequate financing of large severance payments. Given the condition of many of the enterprises, the Government also had to set aside a sizeable fund for recapitalizing them before they could be offered for sale and to provide training and compensation to redundant workers.

In the initial years of Ghana's programme, mostly smaller units were privatized and the net impact on government revenues was insignificant or negative owing to the costs of preparing the firms for sale. The programme gathered momentum by the early 1990s, however, when eight of the most profitable enterprises were sold, including the Ashanti Goldfields, which helped bolster government revenues. Currently over 100 enterprises are slated for privatization, although adverse employment effects continue to be a serious concern.

Among developed economies, the experience of New Zealand illustrates the direct and strong impact of privatization on reducing government expenditures and public debt. Privatization of restructured state enterprises began in 1987 as part of a larger programme of comprehensive structural reforms initiated in 1984 and aimed at increasing efficiency through reduced government regulation and intervention. Asset sales between 1988 and 1994 were equivalent to approximately one quarter of total government debt. The resultant decline of subsidies to enterprises reduced government expenditures significantly. However, the divestiture reduced employment by 40,000 workers, a number constituting 2.5 per cent of the labour force.

Fostering new investment: infrastructure in the Philippines

Privatization, per se, is a transfer of assets and the chief expectation behind the measure is that the new owner will operate the enterprise more efficiently. It also relieves the government of the obligation to expand investment in the enterprise. In some government activities, there is no substitute for government investment. However, in other activities, as government withdraws, it nevertheless retains a strong need to ensure that private investment comes forward.[32]

30 See Economic Commission for Latin America and the Caribbean (ECLAC), "The economic experience of the last 15 years: Latin America and the Caribbean, 1980-1995" (document LC/G.1925 (SES.26/17), April 1996), p. 84.

31 See V. Duran and J. C. Gomez Sabaini, *Lecciones sobre reformas fiscales en Argentina: 1990-1993*, Serie Política Fiscal, No. 68 (Santiago de Chile Comisión Económica para América Latina y el Caribe (CEPAL), May 1995); and V. Duran and D. Collar, *Las políticas fiscales en Argentina: 1985-1992*, Serie Política Fiscal, No. 65 (Santiago de Chile, CEPAL, April 1995).

32 The question of policies to promote investment was a focus of the 1996 *World Economic and Social Survey* (United Nations publication, Sales No. E.96.II.C.1 and Corr. 1).

The Philippines in the 1980s provides a case in point. Public infrastructure investment and maintenance expenditures had been severely reduced from the mid-1980s until the beginning of the 1990s in order to accommodate heavy and rising interest payments on domestic and foreign debt, while a reduction of the budget deficit was sought. Public investment expenditures by the national Government fell from about 3 per cent of GDP in 1980-1982 to about half that in the mid-1980s and never recovered to earlier levels.

By 1991, the power sector, in particular, was in crisis as inadequate supply and distribution resulted in frequent power outages which seriously disrupted manufacturing and export production and undermined economic recovery. There were also serious concerns about the management of the power sector. Between generation and consumption, over 15 per cent of the electricity was lost, compared with losses of between 5 and 10 per cent in better-managed systems. By the same token, the Philippine power sector sold less than 500 megawatt hours of electricity per employee per year, compared with over 1,500 hours in Argentina and almost 5,000 hours in Chile.[33]

The Government's strategy for improving the power sector was to create the space for a greater role for private participation. This fit with the main thrust of the structural reform programme initiated in 1986, which had been to reduce the involvement of government in economic production and rely more on private initiative and markets. In 1991, it thus enacted the "BOT Law"[34] to facilitate domestic and foreign private investment in infrastructure, mainly through the "Build, operate and transfer" model. The idea was that a domestic or foreign private firm would enter into a joint venture with the government or a domestic firm to build and operate a power facility under a government franchise for a set period of time which could last up to 25 years, after which ownership would be transferred to the local counterpart. The power plant was to be operated as a regulated monopoly, allowing the firm to earn a competitive rate of profit. In addition, under the BOT Law, projects were placed on the "fast track" for approval and implementation.

The measure was highly successful in ending the power crisis by the end of 1993 as substantial private generation capacity became operational in a short period of time. Nevertheless, revisions of the original measure have been necessary to correct such problems as high costs and inefficient operation owing to lack of competition and the need to develop an adequate regulatory framework. In 1994, an amendment was enacted to expand the Government's regulatory powers where large externalities or the potential of a natural monopoly existed, while increasing the modes of investment and extending private investment to a wide variety of infrastructure activities. This has been effective in attracting private investment in roads, railroad and water services.

A special opportunity: reduced defence spending

One category of government expenditure that has undergone major changes in the past decade is military expenditure, reflecting a different perception of what security risks are being faced. At the global level, military expenditure fell from 5.7 per cent of the value of output in 1983 to 3.0 per cent in 1994.[35] There were sharp declines both in the countries of the North Atlantic Treaty Organization and in the members of the former Warsaw Treaty Organization,

33 The Philippines was certainly not the poorest performer on either indicator; in some other countries, power losses exceeded 20 per cent of production and sales were on the order of 200 megawatt hours per employee (see *World Economic and Social Survey, 1996*, table X.3).

34 "Act Authorizing the Financing, Construction, Operation and Maintenance of Infrastructure Projects by the Private Sector, and for Other Purposes" (RA6957).

35 Data of United States Arms Control and Disarmament Agency, *World Military Expenditures and Arms Transfers*, various issues.

but there were also significant declines in the developing world.[36]

Most attention has focused on defence cuts in the major countries, especially those that faced each other across the cold-war divide, but there have also been important developments in some of the smaller economies. In some, there had been an internal military struggle and the end of conflict brought a welcome demobilization. In these countries, as in the larger ones, demobilization has entailed costs of retraining, relocation and severance payments, and pressure on unemployment. At the same time, the decline in defence outlays has freed resources for other public uses, including essential infrastructure rehabilitation and social expenditures. Most importantly, the demobilization process was an important signal of the relaxation of tensions and thus provided a boost in confidence in the possibilities of development.

The case of Nicaragua

Nicaragua's civil war continued after the Sandinistas came to power in 1978, and the economy was depressed after the war ended, when power was transferred to the *Union Nacional Opositora* after the election of February 1990. GDP was almost 40 per cent below its 1977 peak; an unmanageable fiscal deficit had been financed with credit creation, resulting in monthly inflation rates as high as 50-100 per cent. External debt had risen from $1.7 billion in 1978 to $10.6 billion in 1990, more than 6 times GDP and 27 times total exports, making Nicaragua one of the most indebted nations in the world. The Government had stopped servicing commercial bank debt in 1986 and multilateral debt in 1988. The opportunity to build a peace economy in the 1990s was thus very important.

Nicaragua indeed saw a sharp reduction in military expenditure – the share of expenditure on the military and police fell from 14.2 per cent of GDP in 1990 to 4.4 per cent in 1994 (see table VI.1). At the same time, the Government was able to raise tax collection by 7 percentage points of GDP and substantial international assistance was supplied in support of the new Administration. Coupled with monetary stabilization and exchange-rate adjustment, a credible adjustment programme was put into effect. With assistance from donor Governments, arrears with multinational organizations were cleared by 1991 and an IMF standby arrangement was agreed. Three bilateral creditors – the United States, Mexico and Venezuela – forgave a significant amount of debt, and at the end of the year Nicaragua signed its first rescheduling agreement with the Paris Club on terms that included writing off 50 per cent of a portion of its outstanding debt-servicing and concessional rates of interest on the remainder. Together, these factors set Nicaragua on a recovery path, first with inflation curtailed sharply and then in 1994 with the beginning of economic recovery.

The military cutbacks were an important contributor to this process. Demobilization of the armed forces, which had begun in 1989, allowed the Government to reduce overall spending without touching politically sensitive areas of the budget. In other words, the military and police have borne most of the cuts in government spending in Nicaragua. Spending on social services continued to absorb approximately 15 per cent of GDP, while fixed capital formation by the public sector has increased steadily from 2 per cent of GDP in 1990 to 14 per cent in 1996.[37] By the same token, government employment has fallen from 287,000 in 1990 to 94,000 in 1996, with the largest single component of the

36 *World Economic and Social Survey, 1995...*, table XIII.1 (see chap. XIII of the 1995 *Survey* for a more detailed discussion of the "peace dividend" and how it has been used).

37 According to national accounts definitions, the increase in public investment has been more modest, albeit still very significant, namely, from 9.3 per cent of GDP in 1990 to 14.3 per cent in 1996.

Table VI.1.
GOVERNMENT EXPENDITURE AFTER CONFLICT: NICARAGUA AND ETHIOPIA, 1990-1994

Percentage of GDP

	1990	1991	1992	1993	1994
Nicaragua					
Military and police	14.2	5.1	5.7	4.3	4.4
Social[a]	14.9	14.8	13.5	14.0	15.4
Investment	9.3	7.6	9.8	11.7	15.3
Ethiopia[b]					
Defence	10.3	8.3	3.1	2.7	2.5
Education plus health	3.3	2.9	3.2	3.0	3.7
Investment	8.1	6.1	4.7	8.3	10.8

Sources: IMF, *Government Finance Statistics*; Banco Central de Nicaragua, *Informe Anual*, 1994 and 1995; and National Bank of Ethiopia, *Quarterly Bulletin*, vol. 10, No. 3.
[a] Education, health, social security, housing and welfare.
[b] Fiscal year, ending 7 July.

reduction having been in the military and police (from 109,000 to 24,000). On the other hand, there has been relatively little reabsorption of these people into the economy and unemployment remains high.

The case of Ethiopia

In May 1991, Ethiopia's military regime was toppled by the Ethiopian People's Revolutionary Democratic Front, a coalition of groups, some of which had been engaged in armed conflict against the Government for as long as three decades. The previous Government had itself come to power in 1974, when it toppled the Government of the Emperor. The ensuing decades were a disaster for the economy: civil war and political instability, a major conflict with neighbouring Somalia in 1977-1978, recurrent bouts of drought and famine and dislocations from government programmes of resettlement and villagization in a failed effort to generate a resurgence of economic growth through central planning. Ethiopia began and ended the period as one of the poorest countries in Africa.

During the years of the former Government, the budget was dominated by military expenditures, which regularly absorbed 40-50 per cent of current government spending during the 1970s – over 60 per cent during the Ogaden war with Somalia in 1977-1978 – and over 30 per cent on average in the 1980s. Defence expenditures averaged almost 9 per cent of GDP in the 1980s; health plus education less than 4 per cent.

By 1991, the cumulative effect of war, sabotage and neglect was evident in the deterioration of the country's infrastructure. An estimated 1,160 schools were partially or completely destroyed, while 90 per cent of the road network and most regional airports suffered considerable war-related damage. Fewer than 25 per cent of the population had access to modern health-care facilities and less than one third of children received immunization.[38]

The new Government in 1991 thus afforded Ethiopia an important opportunity to begin to rebuild the country. In July 1991, a national conference of major political organizations agreed to a National Charter, which installed the Transitional Government of Ethiopia and in 1994 a new constitution established the Federal Democratic Republic of Ethiopia. The unique feature of the new Government is its federal structure which guarantees each State the right

[38] See World Bank, *Ethiopia: Public Expenditure Policy for Transition*, vol. I (Washington, D.C., World Bank, October 1994).

to secede from the federation and which aims to devolve considerable authority to the States in economic and social affairs, a dramatic departure from hundreds of years of central control.

As in Nicaragua, the Ethiopian Government raised public investment, while cutting back military spending sharply (see table VI.1). In addition, tax collection improved and there were considerable foreign assistance inflows. Defence expenditures, which averaged over 30 per cent of total government spending in the late 1980s, were cut sharply in the 1992 budget to about 15 per cent of expenditures and further to under 10 per cent in 1994. This enabled capital outlays, which were concentrated in the rehabilitation of infrastructure, to rise from 25 per cent of total expenditure in 1991 to 40 per cent in 1994. Capital outlays in the regions were directed at the educational and agricultural projects in the rural areas and water and sewerage projects in the regional capitals. Current health and social expenditures were maintained at about 14 per cent of total expenditures.

The rebuilding task in Ethiopia remains enormous. Indeed, the aim is to build a political and economic structure that is dramatically different from anything before in the country and to set the economy on a new development path. It will take considerable time to develop new working relationships between the centre and the regions, and between the public and the private sectors, and to build new skills, especially among the hundreds of thousands of demobilized soldiers and retrenched civil service workers. That GDP has begun to grow again is most encouraging; but gains from growth still need to be experienced for some time and need to be spread widely around the country.

MANAGING THE FISCAL ENVELOPE: REVENUE ENHANCEMENT AND DEFICIT CONTROL

Government budgeting is typically a matter of fitting competing demands into a spending package that is deemed "affordable". In recent years, as noted above, the pressures on government have been to restrict expenditures. In chapter V, the limit to government expenditure was called the budgetary "envelope". The envelope was determined by the maximum sustainable borrowing and the revenue-raising capacity of the tax system. However, if the tax system was reformed to yield more revenue, it would relax the envelope restrictions on expenditure. Clearly, Governments seek to accomplish exactly this. It was also concluded in chapter V that the limit to sustainable borrowing was hard to discover in practice and that, instead, Governments adopted rules of thumb for sound fiscal management. They have also sought rules and procedures to ensure that the combination of expenditures and revenues remains within those limits – that they can, in other words, manage the fiscal envelope.

Raising tax revenues

There are three basic ways to pay for government expenditure: taxes, seigniorage and borrowing.[39] As discussed in chapter V, on a long-term basis seigniorage can provide revenues equivalent only to a few percentage points of GDP and there are limits to borrowing. The overwhelming bulk of resources for government expenditure thus has to come from tax revenues.[40] In the developed

39 This enumeration may be regarded as constituting the generic case that pertains to virtually all countries; however, it is incomplete for some countries, which may have steady non-tax revenues (such as profits from state owned enterprises) and a regular inflow of transfers (such as grants in aid).

40 Revenues from privatization of state assets can help the revenue flow only on a temporary basis (cash saving might continue from reduced subsidy payments to the former state enterprise, assuming the subsidies are indeed discontinued). Also, from the perspective of the balance-sheet approach to fiscal accounting, the gains from privatization are offset by the loss of the state asset, assuming it was valued in the Government's books and sold at its market value.

economies as a whole, general government outlays are on the order of 40 per cent of GDP, while central government expenditures in the developing countries are over 20 per cent of GDP on average.[41] Government spending ratios in transition economies are changing dramatically as part of the transition, but most of the economies are likely to end up with ratios closer to those of the developed countries.

In short, Governments need to raise somewhere between one fifth and two fifths of GDP from tax revenue on a continuing basis. They already do this and tax ratios even above two fifths of GDP can be sustained with a judicious combination of different types of taxes. As one observer concluded:

"It has become fashionable to be pessimistic about the ability to raise large fractions of GDP from taxes. The problems of disincentives to effort and high incentives for tax evasion and corruption of tax administrations are invoked. These are serious issues. But the pessimism can be overdone..."[42]

Policy makers want their tax systems not only to generate substantial revenue streams, but to do so transparently, equitably, at low administrative cost, with minimum distortion of economic signals in the economy, and in a manner that is not perceived as excessively burdensome. Although they are perhaps far from this ideal, many governments are striving to lessen the gap between it and their own tax systems. The broad features of some of their reform programmes may be outlined here.

Increasing the tax base

With weak administrative structures that make the enforcement of tax codes difficult, lower-income countries have traditionally relied heavily on taxes on foreign trade. With a limited number of entry points into a country and with official oversight of ports and international transportation, tariffs and other trade taxes are relatively easy to administer. Indeed, 28 per cent of tax revenue on average still comes from trade taxes in Africa in the 1990s, compared with 1 per cent in developed economies.[43]

Heavy reliance on trade taxes, however, has many disadvantages. In the first place, the whole direction of international trade policy has been towards liberalizing access to markets, *inter alia*, by reducing rates of tax on foreign trade. In the second place, reliance on export taxes and tariffs makes an important source of revenue dependent on the exchange rate: a devaluation of the currency, by increasing the value of trade in domestic currency, would normally increase tax revenues.[44] Likewise, countries that experience large capital inflows and pressures for currency appreciation suffer the opposite revenue result. Moreover, the tax intake on foreign trade is unstable, not just because of fluctuating exchange rates, but also because of fluctuations in prices of export commodities on world markets.

One simple way to broaden the tax base has been to expand the number of items that are taxed, although this may also require additional tax collection machinery, influencing which items are taxed. For example, taxes on petroleum products are easy to administer if there is a single state oil company. Thus in Ghana, for example, the revenue base has remained rather narrow: over 50 per cent of revenues has depended on only four commodities, namely cocoa, a major export crop (15 per cent), petroleum (25 per cent) and alcohol and tobacco (12 per cent).[45]

41 For developed countries, data of OECD, *Economic Outlook*, No. 60 (Paris, December 1996), p. A.31; for developing countries, data of IMF, *World Economic Outlook* (Washington, D. C., IMF, May 1996), p. 63.

42 Nicholas Stern, "Macroeconomic policy and the role of the state in a changing world", in Edmond Malinvaud and others, *Development Strategy and Management of the Market Economy*, Vol I (Oxford, United Kingdom, Claredon Press, 1997) p.156.

43 Simple average of data of 22 African countries and 23 industrialized countries in IMF, *Government Finance Statistics Yearbook, 1996* (Washington, D.C., IMF, 1997).

44 This is not necessarily an incentive to Governments to devalue their exchange rate, as a depreciating currency also raises the domestic cost of foreign debt-servicing and the cost of government purchases of imports.

45 See Seth Terpkar, "VAT in Ghana: why it failed", Development Discussion Paper No. 556, Harvard Institute for International Development, October 1996, p. 7.

More generally, sales taxes may be collected on broad categories of goods and services. Jordan, for example, sought to broaden its tax base and improve the efficiency of the tax system when it switched in June 1994 from a consumption tax to a general sales tax (GST) for all manufactured goods and all imports, and in September 1995 it extended the list of services subject to GST, while also raising the basic rate from 7 to 10 per cent. The Government also planned to gradually convert the GST to a value-added tax.

Indeed, a value-added tax (VAT) has increasingly been introduced to replace the sales tax. It applies a percentage tax not to the value of the sales or output, but to the value that an enterprise adds to the value of the material inputs it begins with. If the same rate of tax is applied across the economy, the VAT is thought to distort market prices and economic decisions less than sales taxes, in the sense that the VAT does not provide incentives for any one particular economic activity over another. Most European economies have adopted the value-added tax as a main source of tax revenue, at a statutory rate of between 15 and 25 per cent.

However, there are drawbacks to the VAT: it is an administratively demanding tax. Not only must it be collected from each covered enterprise, but there are typically exemptions or refunds of VAT on exports and other special classes of goods and services. Administering this system was rather complicated for Kazakstan, for example, which introduced a VAT under the 1995 Tax Code at a rate of 20 per cent (with certain limited exceptions) on all turnover within Kazakstan and all imports, including capital equipment. Foreign investors indicated that the imposition of VAT on imported capital equipment significantly increased the cost of doing business in Kazakstan owing, in particular, to problems in receiving VAT refunds on a timely basis. In response, the Kazak Government experimented with a new procedure beginning in October 1995 – and since made permanent – under which any registered enterprise could import any item on a list of goods and equipment without having to immediately pay the VAT tax on the item. The importing entity had to fill out a short "Obligation declaration" form. The importer would give this form to the customs officials in lieu of the VAT owed. The procedure permitted the importer to claim a VAT credit on the next VAT statement in an amount equal to the VAT owed.

Simplifying the tax code and reducing tax rates

The simplification of tax codes, which make them easier and cheaper to administer, the removal of tax exemptions in order to reduce distortions, and the reduction in the highest rates of direct taxes, which serve as a disincentive to economic activity, have been features of many changes in tax regimes in recent years.

One case in point was the introduction of indexation in order to prevent average rates of income tax from rising owing to inflation. Inflation has this effect when there is a progressive income tax structure, that is to say, when higher incomes are taxed more heavily. This was the case in the United States, for example, where each taxpayer's annual income was divided into brackets and higher rates of tax were imposed on the higher brackets of income. When inflation rates rose to unaccustomed levels in the 1970s in the United States, the rising nominal incomes pushed households into higher income tax brackets (in other words, income ranges with higher marginal tax rates). The extent of

this "fiscal drag" was felt to be inappropriate — it at least had been unintentional — and so there was broad support for tax cuts in 1981, 1982 and 1983, which were adopted in the Economic Recovery Act of 1981, as well as for the indexing of annual adjustments to tax brackets to reflect inflation which began in 1984. However, the decline in inflation in the 1980s was considerably more rapid than anticipated, making the tax revenue forgone more generous than expected. Beginning, however, with the Tax Reform Act of 1986 and then the Omnibus Budget Reconciliation Acts of 1990 and 1992 (see below), these tax cuts were reversed.

The spreading resort to indirect taxes, including the VAT, as noted above, has often been accompanied by a reduction in direct tax rates (for example, taxes on income), marking a shift in the emphasis of revenue collection from direct to indirect taxation. One reason for this shift has been concern about the disincentive effect of high personal and corporate income tax rates, as opposed to, say, a beneficial savings incentive that arises from a consumption tax. This has been a major consideration in Japan, in particular, which needs to secure an adequate revenue stream in the face of a shrinking ratio of working to total population and growing social security obligations, as discussed above. Indeed, this lay behind the increase in the consumption tax from 3 to 5 per cent in April 1997.[46] In addition, the fact that indirect tax collections vary less than direct taxes over the economic cycle helps to smooth the stream of government revenue, and this is another attraction to the Government of Japan.

The prime disadvantage of the shift from direct to indirect taxes is that the latter tend to be regressive. That is, by paying the same amount of tax, the poor pay a larger share of their income in VAT when they make a given purchase than do the rich. From an equity perspective, progressive taxes that take a higher share of the income of rich than of poor people are commonly preferred socially. Also, if rich and poor benefit equally from public services, direct tax structures that have rates that increase with income can be a powerful tool for redistributing income from the rich to the poor. On the other hand, high marginal tax rates on upper-income families have been reduced in recent years in some countries on the grounds that at such high levels the rates discouraged economic activity or forced it underground or overseas.

In Jordan, for instance, the maximum rate of tax on personal income was reduced from 50 to 30 per cent and on corporate income from 55 to 35 per cent, as part of the 1995 tax reform that included the increase in the general sales tax noted above. In addition, tax holidays (in other words, temporary exemptions) were eliminated (except for investment in the less developed regions of the country) and tax deductibility was limited to net interest payments. Similarly, in 1985, New Zealand increased expenditure taxes, imposing a goods and services tax at the uniform rate of 10 per cent, and reduced the top personal income tax rate from 66 to 48 per cent.

The republic of Kazakstan also recently made a major effort to revise its tax laws. To avoid the problem of a proliferation of regulations arising from the enactment over time of piecemeal tax laws, it developed a comprehensive tax code to overhaul the tax regime and place it within a single law. Subsequent modifications of the tax code would require the modification of that one piece of legislation. This approach forces decision makers and economic agents to focus on a set of complex and controversial policy reform issues at one time.

[46] As in other countries, the imposition of the consumption tax was quite controversial. It had originally been proposed by the Tax Research Commission of the Ministry of Finance in October 1977, but the idea was viewed very unfavourably during the national election debates of 1979. It was not implemented until 1989, during a particularly buoyant economic period and in the midst of the asset price bubble.

While such an approach does make for a more systematic arrangement, it also causes the process of developing the legislation and moving it through the executive and legislative branches to be an extremely difficult and time-consuming one. In this case, the Kazak Tax Code of 1995 was enacted by presidential decree and not by Parliament.

Raising tax collection effectiveness

It is one thing to have legislated an elaborate tax structure and, sometimes, something quite different to collect tax revenues as anticipated. The problem can be illustrated in extreme form by the experience of the transition economies. In the Russian Federation, the tax structure had put considerable reliance on VAT and on corporate taxes, especially on the industrial sector, rather than on personal income taxes. When the economy collapsed at the outset of the transition process, led by a very steep fall in industrial production, it had an immediate effect on tax revenues. With a complex set of inter-enterprise sales and purchases and with difficulty collecting payments for goods sold, firms sought to remain in operation by building up large inter-enterprise arrears, plus arrears on tax payments.

In this case, the solution to the Russian Federation's fiscal revenue problem clearly did not include further increases in tax rates on enterprises, which would be seen as confiscatory and would serve only to shrink the effective tax base further, as firms would have yet stronger incentives to exit the formal economy. Instead, efforts have focused on improved collection of existing taxes. Thus, the Russian Federation recently created a "tax police" and introduced individual income tax declarations. In addition, a new tax code, due to be introduced in 1997, is to significantly reduce the tax burden on corporations.

The non-payment of taxes in the Russian Federation and other transition economies has stemmed not just from a deliberate breaking of the law by individuals and companies. As these countries were rapidly developing new institutional structures, their tax obligations were often unclear. In the case of the Russian Federation, a highly centralized State is being replaced by one that gives greater responsibility, including the authority to raise taxes, to its regions. By a decree of December 1994, the President empowered subnational governments of all levels to introduce their own taxes. The net effect was that enterprises often could not predict what their overall tax obligations would be.

The scope for improvement in tax collection is often also large outside of the special situation of the transition economies. The Philippines, for example, underwent a major tax reform in 1986, which altered and simplified taxes and introduced a VAT. The World Bank estimated, however, that tax collection under the new system fell short of "potential" by 50 per cent for personal income tax, 60 per cent for corporate income tax and 50 per cent for VAT.[47] By the early 1990s, however, tax collection improved significantly, owing to improved tax administration and reduced tax evasion. Indeed, as a share of GDP, taxes collected from these three sources almost doubled from 1990 to 1994, together amounting to almost 10 per cent of GDP in the latter year.[48]

In Nicaragua, much of the success of the "Plan Lacayo" that was launched in March 1991 depended on the enforcement of existing tax laws, on imposing severe penalties for tax evasion and on improving tax administration. Although the Government decided not to attempt an ambitious reform of the tax system,

47 Estimates of potential tax revenue should be considered only rough orders of magnitude as they are subject to considerable margins of error; they are derived by applying statutory tax rates to estimates of the income or activity that is subject to tax (see World Bank, "The Philippines: public sector resource mobilization and expenditure management" (Report No. 10056 PH), pp. 36-39).

48 Overall tax revenues also rose, from 14 per cent of GDP in 1990 to 24 per cent in 1994 (as per data of IMF, *Government Finance Statistics Yearbook* (Washington, D. C., IMF, 1996)).

it did succeed in raising tax revenue from 14.8 per cent of GDP in 1990 to 21.2 per cent in 1991 and 24.7 per cent in 1995.[49]

The granting of "tax amnesties" has also been a tool for expanding tax collection. That is, Governments offer to waive their fines and penalties for non-compliance with the tax laws to all individuals who pay their outstanding taxes within a stated period. Not only does this bring in revenue from taxpayers who wish to clear their legal status, but it brings the individuals back into the tax-paying stream. In Ireland, for example, tax amnesties were granted twice: in 1988 and 1994. The first one increased tax revenue by 6 per cent.

These examples can serve only to scratch the surface of the myriad issues in revenue enhancement measures.[50] The political economy as regards enacting the reforms is also quite germane, since the country has to reach a point where the need for change is accepted and the government then has to have the capacity to act.

49 Data of Banco Central de Nicaragua, *Informe Anual, 1994* and *1995.*

50 For a more systematic treatment of tax reform issues, see Robin Burgess and Nicholas Stern, "Taxation and development", *Journal of Economic Literature,* vol. XXXI, No. 2 (June 1993), pp. 762-826; and J. A. Kay, "Tax policy: a survey", *Economic Journal,* vol. 100, No. 399 (March 1990), pp. 18-75.

Politics of a sound fiscal position

Experience shows that keeping to a strict budgetary regimen is difficult. Reducing a structural deficit is perhaps the most difficult challenge of all, especially when the cuts have to be in programmes that benefit constituencies differently and when offsetting gains for the groups that lose out are hard to identify. Sometimes, Governments have sought to make the process easier by tying their hands with firm, legislated targets. Typically, it has not been that simple.

Successive budget strategies in the United States

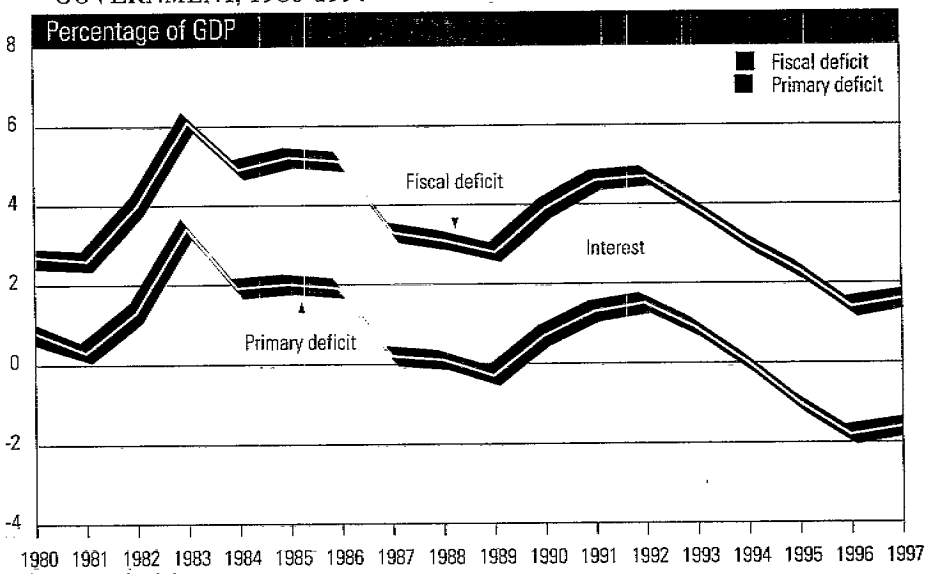
Through much of the 1980s, the federal Government of the United States grappled with budget deficits that had been substantially enlarged by the tax cuts in the early years of the decade. As can be seen in figure VI.2, there was some progress in reducing the deficits in the second half of the 1980s, albeit not by the amounts that were expected. The deficit then grew again, owing to the economic recession of 1990-1991, after which more substantial progress was made. The less successful 1980s strategy was embodied in the Gramm-Rudman-Hollings (GRH) Acts of 1985 and 1987. They set specific deficit targets on a year-by-year basis, with the goal of reaching budget balance over the succeeding six years. Across-the-board cuts in discretionary spending were authorized in the case of deficit overshoots.[51]

These acts did not achieve their objective: overall, the federal deficit was $230 billion larger over the period 1986-1989 than originally targeted. One of the major deficiencies was the focus of the GRH process on the budget year alone, that is to say, on a short time-horizon. This led to postponement of large reductions in the deficit to later years. To justify smaller adjustments, increasingly optimistic economic assumptions were used in projecting future deficits. Indeed, the annual average correction to the budget forecast rose from $8 billion in the four years before the Gramm-Rudman-Hollings Act took effect to $36 billion in the six years afterward.[52] Also one-off measures like asset sales and questionable accounting practices, such as shifting payments from one fiscal year to another or moving some expenditures off-budget, were followed. Such measures showed an improvement in the current position, but did nothing to lower the deficit over the longer run.

51 The spending side of the United States federal budget is divided into discretionary spending and mandatory spending. Discretionary spending is controlled through annual Congressional appropriations. Discretionary programmes cover the entire defence and international affairs budgets, but only one fifth of all domestic spending, the remainder being mandatory. Apart from interest payments on Government debt and deposit insurance, mandatory spending consists mainly of benefit programmes, such as Social Security, Medicare, Medicaid and unemployment insurance benefits. Payments for those purposes are authorized in permanent laws and can be changed only when the Congress modifies the underlying laws.

52 J. M. Poterba, "Do budget rules work?", NBER Working Paper No. 5550, April 1996, p. 23.

Figure VI.2.
FISCAL DEFICIT OF THE UNITED STATES FEDERAL GOVERNMENT, 1980-1997[a]



Source: United States, *Economic Report of the President, 1997.*
[a] Fiscal years ending 30 September.

Accordingly, in later years, when there was no way to further delay the adjustment, the reductions necessary to achieve the targets became unrealistically large. In the 1991 budget, cuts of 34.5 per cent in affected defence accounts and 31.5 per cent in non-defence accounts would have been required to stay on target.[53] Another difficulty with the Gramm-Rudman-Hollings Acts was that by concentrating on cutting discretionary spending, they avoided changing mandatory spending, an alteration which required new legislation; but it was mandatory spending that was a major source of the deficit problem.

The United States was more successful in achieving budget reduction as a result of the enactment of the Omnibus Budget Reconciliation Acts of 1990 (OBRA '90) and 1993 (OBRA '93), which were multi-year deficit-reduction packages, including both expenditure cuts and tax increases. The tax increases were imposed largely on households in the top fifth of the income distribution. Effective federal income tax rates for upper-income groups became as high as those existing before the 1980s tax cuts. Tax increases accounted for about one half of the total deficit reduction.

From a budget process perspective, these Acts introduced certain important innovations. They abandoned deficit targets and added two new features to budgeting procedures. First, annual limits or "caps" were established on discretionary outlays for fiscal years 1991 through 1998. The caps barely allowed discretionary programmes to grow in nominal dollar terms over the entire period. The second new feature was a "pay as you go" procedure for linking revenues and entitlements. Mandatory spending (other than Social Security, deposit insurance and interest on the public debt) was lumped together with revenues and the following constraint was imposed: any expansion in mandatory programmes would have to be funded by cutbacks in existing mandatory spending or by increases in taxes. Likewise, any tax cuts would have to be off-

53 R. D. Reischauer, "Reducing the deficit: past efforts and future challenges", The Frank M. Engle Lecture, The American College, Bryn Mawr, Pennsylvania, 6 May 1996, p. 14.

set by other tax increases or by savings in mandatory spending.

The OBRA '90 and '93, as well as the improved economic climate, helped cut the deficit from $290 billion (4.9 per cent of GDP) in 1992 to $107 billion (1.4 per cent of GDP) in 1996, the lowest level in 17 years. For only the second time in the twentieth century, the federal budget deficit has declined for four straight years. Moreover, the primary balance has been in surplus since 1995 and the debt-to-GDP ratio has begun to stabilize.

This notwithstanding, the Administration and the Congress pledged to push further and fully eliminate the federal budget deficit by the year 2002. Since both major political parties have pledged to cut taxes and since discretionary spending has already been cut back sharply, the bulk of the remaining adjustments have to fall on the mandatory spending programmes. The cuts have already begun to fall on major social programmes, especially those that financially assist the poor. Even so, as under the GRH process, sacrifices are not being spread evenly, but largely postponed until a time closer to 2002. Half of the total five-year deficit reduction is expected to appear in 2002 itself; three quarters of the cuts would take place in the last two years. Also like the GRH experience, the current plan includes revenue gains from asset sales and shifting of tax receipts to 2002 from later years. Moreover, it is well understood that the budget would return to deficit after 2002 as more and more of an ageing population moved into retirement years.

Even while there is no economic argument as such for moving the United States federal deficit all the way to zero,[54] the track record of the GRH-type approach to achieving the target is not encouraging. Indeed, some Congressional representatives have sought stronger means to ensure that the deficit would be eliminated, namely, amending the United States Constitution to require this. Those opposed to that suggestion argue that it would restrict unnecessarily the ability of the Government to function, that it would worsen economic recessions and that it might spawn major efforts to hide expenditures and tax relief in off-budget measures, thereby severely reducing the transparency of the entire budget process. The lesson of OBRA is that politically effective budgeting reform entails forging a workable consensus that leads to a package of concrete decisions to be implemented while the consensus is effective and while the legislature is in office to receive the support or displeasure of the voters for the actions taken.

54 Especially as the primary balance – the deficit measure that features in the sustainability formula given in chapter V – was already in surplus.

The case of New Zealand

New Zealand's Fiscal Responsibility Act of 1994 (the accounting aspects of which were discussed in box V.1) is another example of legislation designed to impose a legal obligation on government to maintain a sound fiscal position. The Act sets out five principles of responsible fiscal management: to reduce total public debt to "prudent levels" by ensuring a fiscal (operating) surplus; once debt has reached prudent levels, to maintain those levels by ensuring, on average, a fiscal surplus over "a reasonable period of time"; to achieve and maintain the net worth of the Government at levels that provide a buffer against future factors that may impact the net worth adversely; to manage prudently the fiscal risks facing the Government; and to pursue policies that are consistent with a reasonable degree of predictability about the level and stability of tax rates for future years.

Unlike the Gramm-Rudman-Hollings Acts, the New Zealand legislation did not prescribe any numerical fiscal targets to be achieved over a time-frame. The Act did not define "prudent levels" or "a reasonable period of time". The fiscal authorities are given the flexibility to interpret these wordings in the context of prevailing economic conditions. Furthermore, the Act allows the Government to make temporary departures from these principles, provided it explains fully the reasons for the departure and how and when fiscal positions are to be restored to meet the principles.

The New Zealand legislation also introduced specific disclosure requirements on the intentions and objectives of fiscal policy and increased the frequency of reporting. A Budget Policy Statement, which discusses strategic priorities for the upcoming fiscal year and long-term fiscal objectives, must be presented three months before the budget is due. The presentation of the budget must be accompanied by a Fiscal Strategy Report, assessing the consistency of the current fiscal position with respect to the Government's intention in the last Budget Policy Statement and analysing the likely development of fiscal variables 10 years into the future. The Government must also produce a half-year Economic and Fiscal Update and a Fiscal Update towards the end of the fiscal year. In short, the Government's fiscal position and its changes quickly become available and the information is more transparent. The underlying theory is that a well-informed general public will be an important watchdog over the proclivities of legislators to succumb to short-term political expediency at the expense of long-run fiscal responsibility.

The future case of the Economic and Monetary Union

While New Zealand's approach is, in essence, an appeal to the informed reason of the public and the OBRA approach in the United States is, in essence, one of forcing trade-offs on legislators, the approach to which the European Union is about to tie itself involves heavy discipline. At its December 1996 summit, the European Council adopted the "Stability and Growth Pact", which sets out how the Union will enforce budget discipline on member States after Economic and Monetary Union (EMU) begins to operate. According to the Pact, the government deficit and debt targets that are part of the entry criteria for EMU (discussed in box V.2), will continue to apply to member countries after EMU begins.

The procedures to be followed will have two dimensions. First, there will be clear and detailed surveillance of each member country's budget process. Each country will prepare multi-annual stability programmes which will be subject to endorsement by the Council of Economic and Finance Ministers (ECOFIN) and made public. The European Commission and ECOFIN will monitor implementation of the programmes and recommend policy changes if it appears that the targets of the programmes are not being met.

If a member country exceeds the deficit target, the Commission will start a process of ministerial reviews that can lead to deadlines for national policy response and sanctions if the deadlines are not met. Not every departure from the 3 per cent budget ceiling will start a disciplinary process in motion. Any fall in GDP of 2 per cent or more in a year of excessive deficit will automatically be deemed "exceptional". If GDP falls by less than 0.75 per cent in a high-deficit year, the presumption is that an excessive deficit has to be correct-

ed, although natural catastrophes and other circumstances could also lead to the year's being classified as "exceptional". If GDP fell by an intermediate amount, the Council (a summit body) would determine how to treat the deficit.

If a member State's excessive budget is not deemed exceptional and if the recommended policy changes are not implemented adequately, the Government in question faces financial sanctions. It would have to make a non-interest-bearing deposit with the Community by the end of the year following the one in which the deficit first occurred. If the deficit remained excessive, the deposit would become a fine two years later. The deposit would be 0.2 per cent of GDP, plus a sum based on the amount by which the country's budget deficit exceeded the 3 per cent target.[55]

There is also a maximum amount of the deposit, 0.5 per cent of GDP, but it seems unlikely that any deposit will ever be made or any fine paid. One way to make the deposit would be to transfer cash from the Government account to an EMU account. If the cash was unavailable, the funds would have to come out of current flows. There are only two possible ways in which it could make the non-interest-bearing deposit. First, it could sell bonds, presumably denominated in Euros (the new European currency), at what would probably be a very high interest rate given the likely market reaction to its difficult situation with the rest of the Community. Second, it could cut back on some expenditure that it had already refused to cut back on, or raise some tax that it had already refused to raise, so as to lower the deficit. If the situation deteriorated to the point where actual sanctions began to be imposed, choice from among these options would appear very difficult. It would more likely provoke a major political crisis in the Union, perhaps including withdrawal from EMU or the Community entirely.

During the year between the time the deficit violation takes place and the deposit sanction is invoked, several sets of interactions between the Government and the Community unfold. For the Government to defy the Community and reach the sanctions stage, it would likely have either strong domestic popular support or none, given the gravity of what was about to occur. It seems, in other words, that if the member countries of EMU maintain the 3 per cent budget deficit ceiling, it will not be owing to a fear of sanctions; rather, it will reflect citizen acceptance – and thus legislative acceptance – of the political commitment to the budget targets. Maintaining the budget deficit ceiling will be understood to be the price required to build mutual confidence in all the participating States. The price would be paid because participation in EMU was seen to be worth the sacrifice of fiscal deficit financing.

The fact that Governments felt that the realization of the EMU required a ceiling on fiscal imbalances itself implied that the new economic structure and set of disciplines were incomplete. From the points of view of definition and measurement addressed in chapter V, the target for fiscal balance embodied in EMU is largely arbitrary; it is also unalterable, and the escape clauses give very limited flexibility. Moreover, looking to the future, the inevitable positive or negative deviations from any planned fiscal balance mean that, in practice, Governments will have to set a target even lower than that prescribed. Even in the present period, when many feel a great incentive to do so, difficulties are being encountered in reaching the *de jure* target. If, in future, domestic difficulties arise, member Governments' accountability to their national constituen-

55 For additional detail, see *InfEuro*, No. 2, a publication of the European Communities (March 1997), p. 12.

cies is likely to make the *de jure* ceiling even more of a challenge to sustain. For example, if difficulties arise in several member States simultaneously, the government leaders concerned, meeting in the Council, will be hard-pressed to force these countries, and thus the Community as a whole, into a significant and economically unnecessary economic contraction. The fiscal target is therefore likely to be applied more flexibly in practice than what was envisaged when it was established.

VII DYNAMICS OF FISCAL REFORM: SELECTED COUNTRY EXPERIENCES

When it comes to actually changing fiscal policy, Governments act in different ways. The political, economic and social circumstances in each country, as well as the international political and economic context, are important determinants of how the fiscal situation is perceived by the Government and the populace, the kinds of policy responses that are attempted, and the changes that result.

Fiscal reform is a process that takes place over several years. A need for change is recognized at the political level. Corrective actions are then taken, frequently after some delay. However, the measures often fall short of fully solving the problem. The need for additional policy steps is then recognized, perhaps after a delay or perhaps immediately. New measures are implemented, and so on. After some number of cycles, spread over long or short periods of time, a package of policies is adopted that succeeds in solving the perceived problems. However, the need for reform inevitably arises again, sometimes owing to an external shock, and the process begins anew.

The dynamics of reform in action are complex and best studied by analysing actual experiences. Although there is much that is unique in any country "story", there are also broader issues that may be observed. The present chapter thus offers narratives for a selection of country reform cases, one drawn from each of the main analytical and geographical groupings of countries.

THE AWKWARD PROCESS OF REVOLUTIONARY CHANGE: FISCAL ADJUSTMENT IN THE NEW RUSSIAN STATE

Economists may be able to think abstractly about how they would design the economic functions of government and the fiscal system to support it, but this is not how Governments and their fiscal systems are designed – or more correctly, redesigned – in practice. Nor does a new system emerge smoothly or simply out of internal conflict and revolutionary change. Even where the old system collapses, the new one is built on the old and not from scratch. There is no time to stop, form a committee, agree to a new design, disassemble the old State and then recreate the new one according to the new design. The Government has to function every day, or at least try to function. Revolutionary change is messy, difficult and requires considerable time to reach an effective working model of the new design, let alone a working consensus that reform is on the desired path. Meanwhile, the Government undertakes expenditures, collects revenues, and perhaps runs unsustainable deficits that require consolidation.

A case in point is fiscal consolidation in the Russian Federation, which – as in other transition economies – has been qualitatively different from fiscal adjustment in established market economies. New state institutions had to be designed and built in such a way as to compensate for and overcome the deep legacy of administrative economic policy-making, as well as to meet the requirements of an emerging market economy. Indeed, fiscal discipline as a central macroeconomic policy issue became a material concern only with the start of transition to a market economy. Under the central planning system, rigid and omnipresent administrative controls of real flows of goods and services had left financial resource movements and prices almost as a matter of accounting. Fiscal policy as such did not exist, something that is certainly far from the case today.

A notional deficit appeared in the budget of the Union of Soviet Socialist Republics (USSR) beginning in the 1970s with the launching of a number of costly projects (defence build-up, major regional development projects and others).[1] With the start of perestroika and the gradual relaxation of the administrative grip on the economy, fiscal deficits grew perceptibly. Enterprises were permitted to retain an increasing share of their revenue and tax revenue fell accordingly. At the same time, the 1986 drop in international oil prices reduced revenue from oil exports, while the Soviet budget had to sustain huge unplanned expenditures for the Chernobyl nuclear clean-up. Further liberalization of the economic mechanism, as exemplified in particular by the 1988 Law on Enterprise which permitted firms to contract the prices for their output and gave them significant control over their wage bill, led to further declines in government revenues. Subsequently, the prices for agricultural products purchased from farmers were raised while the level of retail prices were preserved, and this swelled the implicit subsidy of agriculture. On top of this, minimum pensions were increased 25 per cent and an earthquake in Armenia again necessitated unplanned outlays. In January 1990, the new Government of the USSR raised industrial wholesale prices by more than 50 per cent while keeping retail prices intact. This entailed yet another significant increase in subsidies, well beyond what could be sustained even with a newly imposed 5 per cent nationwide sales tax.

By the end of the 1980s, the Government deficit had swelled to some 9 per cent of gross domestic product (GDP). The deficits were financed by borrowing from the State Bank, which was also underwriting credit expansion by the banking system to the industrial sector. As a result, central bank credit emission – that is, new money creation – rose from under 3 per cent of GDP in 1986 to over 14 per cent in 1990. In a market economy, when the monetary issue grows faster than the value of production at fixed prices, either the additional money is spent on further increases in output or prices rise (or there may be some combination of the two). However, when there was excess money creation under central planning, in other words, when most prices were administratively fixed and supplies were also largely set administratively, then the excess money had to go somewhere else. It either leaked into and stimulated increases in the volume and prices of goods and services produced in the informal economy or the excess funds were held as cash or savings balances.[2]

Already in 1990, the unsustainability of the fiscal imbalances had been realized, but serious corrective measures were not attempted until retail prices

1 The following paragraphs draw extensively on A. Illarionov, "Financial stabilization attempts in the USSR and Russia", *Voprosy Ekonomiki*, No. 7 (1995).

2 Those who realized what was happening would likely seek to convert their growing local currency holdings into foreign exchange.

were administratively raised 55 per cent on average in April 1991. After this, the momentum leading to the dissolution of the Union accelerated. The unpopular character of the measures seriously undermined the authority of the Union Government, which facilitated the efforts of the increasingly insurgent leadership of the Russian Federation to establish an independent economic policy.

The main locus of economic decision-making in the USSR had been at the level of the Union Government. Each republic had its own budget, but most decisions of a budgetary nature were made in Moscow. Each republic also had a branch of the State Bank of the USSR, but it served mainly administrative functions, as monetary policy was also made in Moscow. This changed in June 1991 when the Russian Federation declared itself sovereign and the Russian branch of the State Bank was converted into the Central Bank of Russia. An increasingly liberal credit and fiscal policy of the Russian Federation's Government and its new central bank – now also a credit emission institution – then doomed the Union Government's attempts to implement its relatively restrictive fiscal and monetary policy.

Meanwhile, enterprises ceased their tax payments to the Union and in many cases did not pay the considerably lower taxes to the republic's Government either. The seeds of the future systematic and widespread tax evasion – and, more generally, open indifference to government proclamations – took root. In the event, the deficits in both the federal budget and the republic's budget mushroomed and were financed by massive credits from the two central banks, which also continued to underwrite large increases in enterprise credit. Inevitably, there were dire macroeconomic consequences.

With the dissolution of the Soviet Union at the end of 1991, the burden of transition and the economic functions of the State fell wholly on the former republics. The next few years would be tumultuous, with output tumbling and inflation exploding in all the successor States, albeit with stabilization and growth returning in some countries, such as the Baltic republics, before others. In the Russian Federation, annual inflation rates were reduced appreciably, although economic growth has remained elusive.

As described by *World Economic Survey, 1993*, "After several years of debate and hesitant half-measures, the Russian Federation entered the year (1992) with its command-economy structures almost completely non-operational, but not yet replaced by a new mechanism".[3] Two main groups in the Government contended for the economic future of the Russian Federation. On one side were the reformers of varying degrees of militancy who came into government at different points. They sought a rapid transition to a liberalized and privatized economy in which economically meaningful prices would guide individual enterprise decision-making. In their view, the Government should have a limited economic role and sound macroeconomic policy would build the confidence of economic agents in the currency and in the future, thereby encouraging the long-term private investment so necessary for the ultimate success of transition. The contending group was an "industrial lobby", largely drawn from state enterprise management and its supporters in Government. The members of the group feared the chaos that seemed to be growing under the new policy direction and sought primarily to reverse the decline in production through government assistance. They argued for undertaking market-oriented reforms at a slower pace, which, they claimed, was socially less disruptive.

3 United Nations publication, Sales No. E.93.II.C.1, chap. II, subsect. entitled "Transition begins in the Russian Federation". (The economic policy processes underlying the dissolution of the Soviet Union and the early years of transition were monitored annually in the *World Economic Survey, 1991* (United Nations publication, Sales No. E.91.II.C.1), chap. II, sect. entitled "Economies in transition"; *World Economic Survey, 1992* (United Nations publication, Sales No. E.92.II.C.1 and Corr. 1 and 2), chap. II, sect. entitled "The transition to new market economies"; *World Economic Survey, 1993* (United Nations publication, Sales No. E.93.II.C.1, chap. II, sect. entitled "Difficult transition to market economies"; and *World Economic and Social Survey, 1994* (United Nations publication, Sales No. E.94.II.C.1 and Corr. 1), chap. II, sect. entitled "Transition economies at a turning point".)

Fiscal policy see-sawed back and forth from 1992 to early 1995, as one or another of the groups gained control of the fiscal or monetary machinery and, ***inter alia***, either expanded budget subsidies and bank credits or curtailed them. However, the acceleration towards hyperinflation each time the "support-of-industry" forces were ascendant did not help their cause and the reformers began to win the struggle, as important departures in fiscal policy were incrementally initiated.

Thus, in 1993, short-term state securities were introduced, as a new form of state financing that entailed a non-monetary avenue of deficit financing, as well as a new instrument for financial management in an increasingly market-oriented banking and enterprise sector. Also in 1993, the Law on the Budget declared that the financing of the deficit would be limited exclusively to non-inflationary means. In the event, this provision was not followed, but it established an agreement on the desired direction for policy.

In September 1994, another attempt at fiscal correction was contained in the Government's programme for a "strict" fiscal policy with a pre-set and "limited" deficit. Financing of the deficit was to rely on revenue from the sale of state securities and outside financing from international financial institutions, with financing by the Central Bank of Russia discontinued completely. In March 1995, prodded by the International Monetary Fund (IMF), the Government and the Central Bank of Russia issued a joint declaration on economic policy that stipulated a number of economic policy measures for macroeconomic stabilization. In the area of fiscal policy, the declaration envisaged abolishing tax exemptions and subsidies to foreign trade, as well as prohibiting the executive organs of any level from making decisions that would increase the Government's financial obligations and the budget deficit. In short, internal macroeconomic policy coordination had been brought front and centre.

All in all, the introduction of non-inflationary instruments for financing the budget deficit, the commitment to a coordinated macroeconomic policy and a resolute rejection of the earlier reliance on central bank credits for deficit financing laid the foundation for the macroeconomic stabilization of 1996. The result was that a "moderately restrictive" monetary and fiscal policy led to a drop in inflation from 215 per cent in 1994 (December over December) to 131 per cent in 1995 and 22 per cent in 1996. Budget deficits were kept at the level of 3-4 per cent of GDP, although this understates the actual fiscal situation, since some Government payment obligations were not met and some expenditures were moved off-budget.[4]

Today, economic policy debates are looking beyond the goal of fiscal consolidation per se to structural and institutional aspects of transition. The new question, in other words, is whether the new fiscal position is sustainable. Many of the cuts in public spending were abrupt and not situated within a programme for transition. Social spending, a crucial function of government, needs perhaps to be more effective rather than smaller; and the tax system that evolved in the past few years – high and changing tax rates imposed by multiple layers of authorities – may have unintentionally established strong incentives to displace activity into the informal sector, depriving the Government of part of what should be its regular revenue stream.

Moreover, the old debate between market reformers and proponents of "support for industry" who claim that further focus on budget consolidation would

4 See, for example, Adrienne Cheasty and Jeffrey M. Davis, "Fiscal transition in countries of the former Soviet Union: an interim assessment", *IMF Working Paper*, June 1996, p. 2.

unnecessarily hinder the resumption of economic growth is still raging. Policy makers have to find ways, in other words, to preserve the fruits of their anti-inflation drive while at the same time providing stimuli for economic growth and transition and for the maintenance of social peace. In short, the early cycles of fiscal reform are not yet complete.

"CROSSING THE RIVER BY FEELING FOR STONES": BACKGROUND TO CHINA'S 1994 FISCAL REFORM

A new economic strategy, even one that turns out to be a major success on several fronts for several years, usually does not anticipate all the policy tools and institutions required, and thus in time the need is recognized for further reform measures. China's economic reform strategy since 1978, as encapsulated in an aphorism by the late Deng Xiao Ping, its designer, has been to "cross the river by feeling for stones", that is to say, step by step, learning and responding as one goes. With the accumulation of experience in governing under the new strategy, some of the policies that aimed to implement it came to be questioned. The goals of the economic strategy did not change, but the policies to bring about the goals were adjusted in major ways. Far from setting off on another basic design, the new reforms were seen as steps needed to preserve the initial one from becoming unsustainable. The events leading up to China's 1994 fiscal reforms illustrate the process in action.

In November 1993, the Third Plenum of the Central Committee of the 14th Party Congress decided on a package of reform measures encompassing many areas in the economy, in order to bring about a new, more comprehensive stage of the transition to a socialist market economy.[5] The changes included major fiscal and financial-sector reforms, which began to be introduced in 1994. The new policy direction that had been advanced in 1978 had produced remarkable rates of economic growth and change, but it also set in motion certain developments that by the early 1990s were increasingly seen to be unsustainable. The basic design had been to devolve economic power away from the centre, and in this regard the strategy was very successful. However, it became clear that, as the strategy had not anticipated some policy outcomes, the introduction of certain new policy departures was warranted.

The narrative begins with the turning away from central planning in China in 1978. The Government sought to increase the efficiency and dynamism of the Chinese economy mainly by decentralizing decision-making and providing incentives for economic agents to behave according to the economic logic of a market environment. In the first stages of the reform, from 1978 to 1984, measures were largely targeted on the rural area and the agricultural sector, with efforts at reform of the industrial sector limited to a few experiments.

The fiscal consequences of reform during this period included a buoyancy in central government revenues, which rose as a share of general government revenue (see table VII.1). The base of central government revenues was the profits and tax payments of large and medium-sized state industrial enterprises. These rose substantially with the improvement in agricultural output (which increased production in the industrial sector) and the increase in agricultural incomes (which raised the demand for industrial products).[6] With the decentralization of agriculture, on the other hand, non-central government revenues

5 For a general summary of the reforms (in Chinese), see "Comprehensive reform and major breakthroughs -- main theme of new stage of economic reform", note prepared by Research Team on Current Situations, Institute of Economics, Chinese Academy of Social Science, in *Jingji Yanjiu* (Economic Research), No. 1 (January 1994), pp. 3-11.

6 Prices at this point remained largely fixed.

Table VII.1.
REVENUES OF CENTRAL AND LOCAL GOVERNMENTS IN CHINA, 1978-1995

Percentage

	General government budgetary revenue[a]		Extrabudgetary revenue[b]		Consolidated government revenue as share of GNP (a)+(b)
	Total revenue as share of GNP (a)	Central share of revenue collection	As share of GNP (b)	Central share of total	
1978	34.8	15.5	9.7		44.5
1979	31.7	20.2	11.4		43.1
1980	29.1	24.5	12.5		41.6
1981	27.3	26.5	12.6		39.9
1982	27.1	28.6	15.4	19.2	42.5
1983	27.7	35.8	16.7	22.4	44.4
1984	26.5	40.5	17.1	25.6	43.6
1985	26.8	38.4	17.8	27.7	44.6
1986	25.2	36.7	17.9	29.3	43.1
1987	22.8	33.5	18.0	32.2	40.8
1988	19.9	32.9	16.8	32.3	36.7
1989	20.4	30.9	16.6	32.8	37.0
1990	18.9	33.8	14.6	30.5	33.5
1991	16.9	29.8	15.0	37.7	31.9
1992	14.7	28.1	14.4	43.5	29.1
1993	13.8	22.0	4.2	5.2	..
1994	12.0	55.7	4.0	5.1	..
1995	11.5	52.2	..	..	..

Source: State Statistical Bureau of China, *Statistical Yearbook of China*, various issues.

[a] The Chinese Government's definition of budget revenue differs from the standard definition. Adjustment to the standard definition was made by subtracting borrowed funds from revenues and adding back subsidies, which are treated in Chinese government accounts as negative revenues.

[b] The fact that, in 1993, some categories of revenues were reclassified accounts for discountinuity in the data.

fared less well and overall general government revenue thus fell as a share of gross national product (GNP). Overall government resources, however, did not fall as a share of GNP in the early years of reform owing largely to the rise in extrabudgetary revenues. These included earmarked funds (special surcharges for specific purposes), enterprise funds (such as for capital depreciation), retained profits and welfare funds, and funds raised by state enterprises and institutions, such as through tuition or road-maintenance fees.

Beginning in 1985, however, urban areas and the industrial sector became the focus of the reform agenda. Measures included price liberalization and permission to establish non-state activities, including joint ventures with foreign investors, which were later actively encouraged. These measures extended decentralized decision-making, but they also eroded the revenue base of the Government. Perhaps even more significantly, they eroded the Government's ability to manage the economy at the macroeconomic level and to use the budget to reduce regional income inequality.

In other words, the industrial reforms introduced profit-sharing and management responsibility schemes, wherein enterprises retained either a pre-set share of profits (the profit-sharing case) or all profit above a contracted quota after taxes (the management-responsibility case). As a result, enterprises no

longer handed over all their earnings to the Government. Also, after artificially low agricultural and raw material prices were raised, the profitability of state industrial enterprises fell, and this also reduced fiscal revenues. In addition, when decentralization measures reduced artificial barriers to entry and the degree of monopoly fell in some highly profitable sectors of the economy, the profits of state-owned enterprises (SOEs) and thus government revenues (both budgetary and extrabudgetary sources) were further reduced. Subsequent reforms extended market-type incentives to state enterprises themselves. As a result, the remitting of SOE profits to the Government was increasingly replaced by smaller SOE tax payments, although tax administration and enforcement institutions were quite underdeveloped.

The consequences of these reforms for government revenues can also be seen in table VII.1. Consolidated government revenues, which had been between 40 and 45 per cent of GNP between 1978 and 1985, fell sharply.[7] Budgetary revenues of central government have been most dramatically affected. Some decline in the Government's share of GNP had been expected, as the central theme of reform was economic decentralization. It had been fundamental to the new strategy that the Government would loosen its control over the allocation of resources, which would naturally be manifested in a decreasing share of output under direct government control and thus a decrease in both revenues and expenditures of government.

Nevertheless, the actual revenue decline appeared excessive. Indeed, the World Bank judged China's expenditure on health, education and other social services that are crucial for sustained economic growth to be in need of expansion. In a simulation study, the Bank concluded that adequate coverage for these underfunded areas would require additional government spending in an amount equivalent to 4.6 per cent of GDP.[8]

One additional complication of the shift from government reliance mainly on revenues transferred as "enterprise income" to tax revenues stems from the fact that in China, as was not the case in most countries, tax collection had come to be administered mainly by local levels of government. Central to the centre-local fiscal relationship has been the scheme of revenue-sharing: a fiscal contract system had been established in which local governments either arranged a fixed revenue or subsidy quota with the centre (the Guangdong model) or agreed to hand over to the centre a pre-set share of targeted revenue (the Jiangsu model). In a manner similar to that of enterprise contracting, local governments could retain revenues above the contract quota or keep a larger share of revenues if revenue growth exceeded the rate specified in the contract.

The nature of the contracting system made the centre's revenue stream income inelastic, since incremental revenues from faster national income growth were either retained by local authorities or transferred by them in reduced percentages to the centre. This thus caused the decline in the central Government's share in revenue collection noted above. As a result, the central Government repeatedly found itself short of revenues to meet the demand for expenditure.

Moreover, the centre's ability to use fiscal measures for macroeconomic stabilization purposes was severely eroded under the fiscal contract system, particularly by the late 1980s when the chief macroeconomic problem became how to reduce excessive aggregate demand and inflationary pressures. Once tax revenue contracts with lower levels of government had been fixed, there

7 The sharp drop in extrabudgetary funds in 1993 mainly reflects a change in data classification: extrabudgetary revenues of state-owned enterprises and the governmental agencies that administered them were reclassified. Pre-1993 and post-1993 data in this category are thus not comparable.

8 World Bank, *The Chinese Economy: Fighting Inflation, Deepening Reform*, vol. I, Report No. 15288-Cha (4 April 1996), pp. 37-39.

was little room to adjust tax rates. Furthermore, there were few fiscal policy handles for discouraging expenditure by the lower levels of government, whose revenues were being fed by strong economic growth.[9]

More precisely, as revenue collection and retention by regional and local governments were a function of the rate of local economic growth, the local authorities had a vested interest in promoting high rates of regional output expansion, regardless of the national macroeconomic situation. Whereas under central planning, most resources were passed to the centre and funds for centrally determined expenditures were passed back to the local level, under the increasingly decentralized Chinese system, expenditure of local governments became more directly constrained by the amount of revenues that could be earned and retained locally. There was thus a strong incentive for local authorities to establish and expand their own enterprises. Use of the resources generated by these firms was largely independent of central control and thus the incentive to expand them and then deploy their retained earnings in additional investment was clear.[10]

In addition, owing to the decentralization process, inequality in regional economic development acquired a new dimension that needed to be addressed. In a country the size of China, with limited free geographical movement of population, one of the roles of the central Government is to use its resources to mitigate regional differences in income in order to meet the need for basic public services in all regions. In the process of fiscal reform, this equalizing capacity of the central Government had been weakened considerably.

All in all, the fiscal consequences of the decentralization strategy had been quite substantial. Of course, it decreased the amount of resources under government control, compared with the situation under central planning; but the fact that it also started and then continued to reduce the share of central government revenue in total government revenue kept weakening the role of the central budget, as against the local budgets of the economically booming areas. Increasing reliance on self-financing enabled economically more developed regions, in particular the coastal provinces, to spend more in support of local development, thus reinforcing the rising regional income inequality.[11]

In sum, by the early 1990s, the fiscal system in China had become politically and economically unsustainable. Part of the 1994 policy changes thus aimed to strengthen the centre through tax reform. Under the old tax system, virtually all tax revenues except tariffs on foreign trade had been collected by local levels of government. Those revenues were partly passed up the governmental structure, from local county through province to central Government, as per a sequence of contractual agreements, as discussed above. Under the new tax assignment system, certain tax revenues were reserved for the centre, including the consumption tax, income tax paid by state enterprises owned by the central Government, and income tax paid by non-bank financial enterprises licensed by the central bank and the railways, all banks and insurance companies, plus taxes paid on offshore oil resources. Local governments would command revenues generated from personal income tax, income tax paid by local enterprises, capital gains tax on land and property sales, estate tax and stamp duty. In addition, the central Government would get 75 per cent of the value-added tax and 50 per cent of the stock transaction tax.[12]

Implementing such a major reform takes time, as it is quite complex and the

9 There were also major limitations on the capacity of the centre to curtail its own outlays; for example, subsidies to consumers (as price reform raised living costs) and to enterprises (not enforcing bankruptcy) continued to increase under the political imperative to avoid disturbing social stability.

10 One consequence was the creation of excess capacity in some sectors, which heightened regional competition and led to the erection by protective local authorities of new barriers to the interregional flow of goods and services.

11 Tianlun Jian, Jeffrey Sachs and Andrew Warner found evidence of convergence of regional income disparities during the initial period of economic reform which emphasized rural reforms, and divergence since 1990 (see "Trends in regional inequality in China", Working Paper No. 5412, National Bureau of Economic Research, Cambridge, Massachusetts, January 1996).

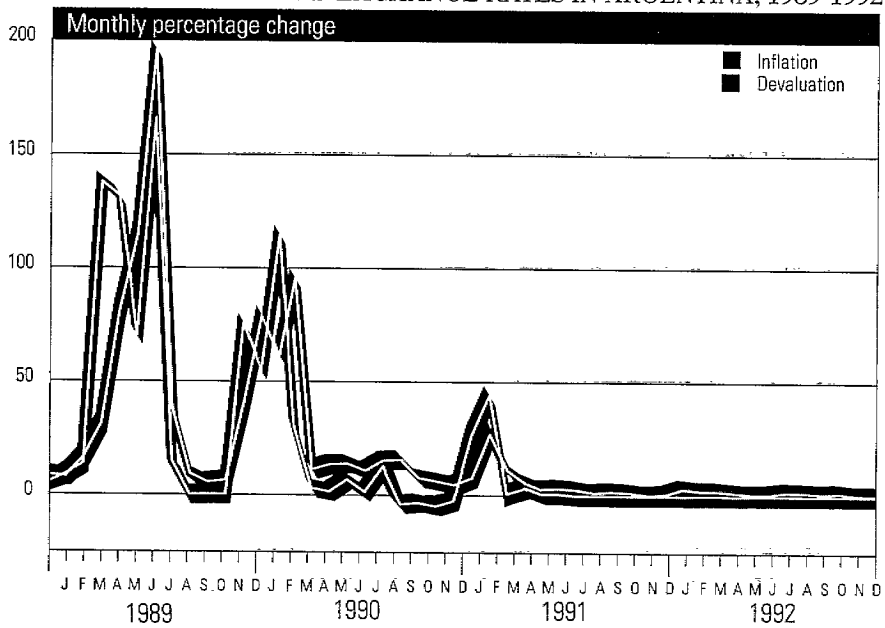
12 For additional details on the new tax system, see Tsang Shu-ki and Cheng Yuk-shing, "China's tax reforms of 1994: breakthrough or compromises?", *Asian Survey*, vol. 34, No. 9 (September 1994), pp. 769-788.

interests of all levels of governments are affected. Also, as in many other developing countries, institutional capacity in tax administration is relatively weak in China. Nonetheless, the share of the central Government in total budgetary revenue increased substantially, from 22 per cent in 1993 to over 50 per cent in 1994 and 1995 (see table VII.1). In this regard, the new tax assignment scheme seems to be effective. Also, with the financial, banking and exchange-rate reforms, and especially controls on credit emission, inflation has fallen from 24 per cent at its peak in 1994 to 8.3 per cent in 1996, while growth of GDP remains at the extremely strong level of about 10 per cent per year. On the other hand, during the transitional period 1994-1995, the ratio of budgetary revenue to GNP continued to decline, slipping from almost 14 per cent in 1993 to 12.0 per cent in 1994 and 11.5 per cent in 1995. This seems to signal that the period of fiscal reform in China is not yet complete.

CREDIBILITY BUILT FROM FAILURE: ARGENTINE POLICY IN THE 1990s

Sometimes it becomes widely apparent within a country that the macroeconomic situation is untenable and that the set of policies that were being pursued are not working. Most commonly, inflation rates rise and do not return to the range of acceptable values. Sometimes the economy stagnates and unemployment and a fall in real wages accompany the high inflation. It may be that the policy strategy being followed requires the implementation of a full set of government actions to be effective whereas only part of the set was deemed politically feasible. Whatever the reason, the failure of the policy becomes inescapable. Trying something new, however, may require a new government, a

Figure VII.1.
INFLATION RATES AND EXCHANGE RATES IN ARGENTINA, 1989-1992



Source: Data of Economic Commission for Latin America and the Caribbean (ECLAC) and IMF, *International Financial Statistics,*

new electoral mandate and a new team of policy makers. This was the case in Argentina at the end of the 1980s.

In July 1989, a new President took office in the Argentine republic, after a decade of economic instability, high inflation, debt crisis and a sequence of failed policy efforts to correct the situation.[13] The President took office on the heels of a surge in inflation that reached almost 200 per cent in the inaugural month. However, business confidence was restored by the appointment of a well-known business leader as minister of finance and by the beginning of fiscal and financial reform. This seemed to stem the outflow of funds from the economy, and virtually stopped the associated sharp devaluation of the currency and the near-hyperinflationary rate of price increase. By October, the monthly inflation rate was only slightly above 5 per cent (see figure VII.1).

In December, however, inflation was again climbing rapidly, as the inadequacy of the fiscal measures taken had become clear. A new plan was instituted, but inflation kept accelerating, reaching almost 100 per cent in March 1990. Then, in April, a new attempt to curtail government expenditure and raise fiscal revenues was instituted. Inflation in April fell to only 11 per cent and by December 1990 it was less than 5 per cent.

The new Government and the country thus went through a learning period embodying two brief episodes of runaway inflation which could only have impressed upon all the relevant actors that real adjustments had to be accepted. The lesson was an expensive one: in 1989 GDP fell 6 per cent and while output did not decline further in 1990, it did not rise either; also, more that $8 billion left the country in 1989, as measured on net financial account in the balance of payments and almost another $6 billion left in 1990, although $3 billion of this represented a mandated conversion of domestic obligations into dollar-denominated bonds.[14]

Nevertheless, certain reforms had begun in those early years. At the heart of the reform was the acknowledgement by policy makers of something that Argentina's economic actors all knew, namely, that money creation had become a regular tool for financing the public-sector deficit. There would thus be little credibility in any anti-inflationary monetary policy without a major fiscal reform. The first reforms implemented in 1989 turned out to be less effective than first expected, but deeper reforms followed. Viewed another way, it took time for the momentum of the reform movement to build and for the revenue results to become visible.

More precisely, tax administration and control began to be tightened in 1989 and a new tax penalty law was adopted in 1990 to deter traditionally widespread tax evasion. A broader and uniform value-added tax was adopted for goods in February 1990. It was extended to services in November of the same year and was gradually raised substantially afterwards. In 1991 and 1992, these steps plus the revenue gain from the beginning of economic recovery led to markedly improved tax collection, allowing reduction of more distortionary taxes and an overall simplification of the tax system.

Meanwhile, the Government also sought to contain expenditures. A legal and administrative machinery to reduce the federal bureaucracy was set up in February 1990 and in November the state telephone company was privatized. By 1994, the federal civil service had been reduced 50 per cent (although a large portion of the staff were reabsorbed over time at state and municipal levels) and

13 This account draws in particular upon Viviana Durán and Diana Collar, *Las Políticas Fiscales en Argentina: 1985-1992*, Serie Política Fiscal No. 65 (Santiago de Chile, Comisión Económica para América Latina y el Caribe (CEPAL), 1995); José María Fanelli and Roberto Frankel, "Notes on the Argentine experience with stabilization and structural reform", paper presented to a conference on "After neoliberalism in Latin America, now what?", New School for Social Research, New York, 2 and 3 May 1996; and discussions with current and former officials of the Argentine Government, which are gratefully acknowledged.

14 The "Bonex Plan" of January 1990 mandated that domestic currency fixed-term deposits held by individuals in commercial banks and by financial institutions at the central bank should be exchanged for 10-year lower-interest dollar-denominated obligations of the Government.

several large state enterprises had been sold off, including two television stations, the state airline, long-distance cargo lines, defence industries, the largest distributor of electricity, power-generating companies, ports, reinsurance and the state oil company. In addition, government debt-servicing obligations were reduced by debt/equity swaps (largely associated with privatization) and completion of the final debt-restructuring exercise with Argentina's foreign commercial bank creditors. Other measures addressed operations of the social security pension system and the financial imbalances of the provincial governments.

Efficiency and development strategy concerns motivated many of these measures, largely revolving around increasing the role of competitive market forces in the economy; but budget correction was understood to be essential. Even so, the traditionally poor Argentine fiscal record damaged the credibility of the Government and inflationary expectations remained high at first even after the budget deficit began falling. The innovation to address this problem entailed an extreme policy change.

A new finance minister was appointed at the beginning of 1991 (although he was already part of the policy team) and on 21 March 1991 a completely new monetary policy was initiated. In effect, the possibility of new central bank financing of the fiscal deficit was eliminated by turning the bank into a currency board whose main mandate was to buy and sell foreign exchange at a fixed exchange rate, one that would require an act of Congress to change. This meant that the only way new local currency could be added to the economy was if the inflow of foreign exchange to Argentina exceeded the outflow, with the central bank buying up the excess with new pesos.[15] The inflation rate then, indeed, fell rapidly and the exchange rate has remained fixed since then, albeit at the expense of having to adjust relative prices and wages wholly through domestic price changes in lieu of devaluation.

The macroeconomic stabilization plan worked in the sense that fiscal deficits were brought down, inflation was reduced to low single-digit levels and, at least from 1991 until 1994, output grew strongly. Nevertheless, the measured unemployment rate doubled from 1990 to 1994 and real wage rates stagnated. Moreover, deep cuts had been made in public investment – the main adjustment variable in discretionary expenditure policy in Argentina – and this has inevitably led to the deterioration of the quality of basic social services. However, the Government was re-elected and the overall policy continued to be supported, even during 1995 at which time the policy stance came under severe pressure when Argentina was hit by the contagion effect of the Mexican peso crisis.

If the Argentine situation thus remained difficult for many, the memory of the severity of the crisis at the beginning of the decade seemed to remain alive for all. Secondly, and directly related to the first point, as opposed to previous fiscal adjustment plans, this one enjoyed a large base of political and social consensus, of which the Government took full advantage in the implementation of several drastic measures. The speed and simultaneity of the implementation of measures on several fronts were unprecedented. In some cases, in particular as regards some of the privatization programmes, the imperative to act quickly may have come at the expense of acting most efficiently or equitably.[16] However, the policy measures were understood to be part of a grand reorientation, aimed not only at correcting the existing disequilibria, but at fully redefining

15 The Argentine economy had been largely "dollarized" during the high inflation period (in other words, the dollar had become a medium of exchange as well as a unit of account in the domestic economy) and one feature of the new reform was to start from that fact, and deeply liberalize the financial sector so that both currencies would freely circulate with a fixed exchange rate between them, and rebuild confidence in and demand for the peso (for additional details, see José María Fanelli and José Luis Machinea, "Capital movements in Argentina" in *Coping with Capital Surges*, Ricardo Ffrench-Davis and Stephany Griffith-Jones, eds. (Boulder, Colorado, Lynne Rienner Publishers, and Ottawa, International Development Research Centre, 1995), pp. 145-188.

16 See Viviana Durán and Diana Collar, *Las Políticas Fiscales en Argentina: 1985-1992*, Serie Política Fiscal No. 65 (Santiago de Chile, CEPAL, 1995), p. 62.

the role of the State in the economy after the old role had been discredited.

In short, implementation of fiscal consolidation as part of a broader adjustment and reform programme appears to have reinforced the credibility of the Government commitment to the plan and bolstered its political support. On the other hand, recent public opinion polls indicated eroding support for current policies and the Government faces new elections in the second half of 1997 where the issue will again be addressed.

SETTING A POLICY COURSE AFTER ECONOMIC COLLAPSE: GHANA'S FISCAL RECONSTRUCTION IN THE 1980s

Some policy makers face a special challenge in fiscal policy design that their counterparts in other countries are happily spared, namely, having to confront the deeply run-down condition of the basic public institutions of the country. Perhaps the institutions functioned well at some point in the past, but over time incentives to maintain them evaporated. Perhaps the purchasing power of civil service salaries fell so low that workers needed to work other jobs to survive, including during office hours. Perhaps the occasional practice of graft became the culture of graft. Perhaps the most promising of the younger generation emigrated. Perhaps individuals with investable funds took them out of the country. Perhaps the physical infrastructure deteriorated from years and years of poor maintenance.

In this kind of situation, reforming political forces start with what they inherit and work from there. Indeed, they will need to build credibility and support as they go. Even if there is a strong popular constituency for reform, the Government's capacity to develop policy may be limited by the dearth of human resources still in the country, not to mention financial shortages. In this kind of situation, the reform process would undoubtedly take a long period of time to put into effect and would merge into and become part and parcel of the development strategy itself.

This was very much the situation in Ghana in the early 1980s. When Flight Lieutenant Jerry Rawlings seized power on 31 December 1981, the country was in disarray. Per capita income had peaked in Ghana in 1974 and had fallen almost steadily since then, decreasing by about one third by 1983. Roads desperately needed repair; the railway that had once carried goods for export no longer functioned and the condition of the ports was not much better. Communications systems did not operate either. Inflation was over 100 per cent.

The ruling Provisional National Defence Council (PNDC), chaired by Mr. Rawlings, at first followed a popular-nationalistic strategy to deal with the crisis, attacking the corrupt privileges of the elite, creating people's defence committees and workers' defence committees to return power to Ghana's people, and imposing price and wage freezes to control inflation. The drive to stop corrupt practices was very popular and had a measure of effect; but this meant that it disrupted the economic system as the system then functioned. The economic situation of the country thus continued to deteriorate.[17]

PNDC had included a wide variety of political and economic views, including radical Marxist ones, but it soon turned to the Bretton Woods institutions for financial support and policy advice. The radical wing of PNDC had been unable to develop a viable strategy to deal with the economic crisis; nor was it

17 For a description of the adjustment programme pursued in the 1980s by the new Government and its antecedents, see *World Economic Survey, 1989* (United Nations publication, Sales No. E.89.II.C.1 and Corr. 1), chap. VIII, sect. entitled "Ghana's adjustment: institutions and structures".

able to raise financial assistance. Meanwhile, the situation reached catastrophic proportions in 1983 when a very severe drought and bushfires hit Ghana and an estimated 1 million Ghanaians had to return home from Nigeria. Something had to be done; the international community was ready to assist; and the population looked to the Government to deliver on reversing the economic decline.[18]

Ghana began its Economic Recovery Programme (ERP) in April 1983. It was supported by a standby arrangement with IMF, followed up by a series of Fund and World Bank arrangements and considerable bilateral support that extended over many years. Ghana thus became one of the first countries in sub-Saharan Africa to adopt a comprehensive structural adjustment programme. It entailed reductions of controls and correction of highly distorted prices, including higher retail prices for petroleum products and a sequence of devaluations of the exchange rate, followed by introduction of foreign exchange auctions in 1986. Such measures reduced incentives for smuggling and by bringing more economic activity into the legal economy, also raised public-sector tax revenues, as did the devaluations, which raised the local currency value of exports and imports. In addition, tax rates were restructured, civil service salaries were raised substantially and by late 1986 the civil service began to be retrenched, cost recovery for social services was enhanced, tax collection efforts were strengthened and compliance improved. The prices paid to Ghana's cocoa farmers were raised and 25,000 "ghost workers" were removed from the payroll of the Ghana Cocoa Marketing Board, followed in 1987 by the removal of 29,000 actual workers, almost 40 per cent of the staff.

By the end of 1984 and again in 1985, the new policy began to show results in rising GDP, export and import volumes and slowing inflation. Part of the initial results reflected the end of drought (measured GDP increases also reflected the fall in smuggling and the rise in legal activity); but the improved growth continued unabated long after these effects would have ended. Indeed, the spread between the parallel and the official exchange rate – and thus the smuggling incentive – fell from about 2,100 per cent in 1983 to 36 per cent by 1987.

Fiscal revenues rose (60 per cent of tax revenue was on international trade) and budget deficits fell. Three exceptional factors also contributed to the increase in government revenues: an improvement of the terms of trade in the mid-1980s, the higher income tax revenues as a result of higher civil service wages and a higher implicit petroleum tax as retail prices were left unchanged when international oil prices fell in 1986. On top of this, Ghana received concessional external assistance amounting to 2-3 per cent of GDP in the second half of the 1980s.

As a result, government expenditure rose steadily in the 1980s, which was quite unlike the standard adjustment exercise – although the starting point for Ghana was also quite unlike the standard one. Expenditures on such items as health, education and public investment (particularly in infrastructure) increased as a percentage of GDP, as a percentage of government expenditures and in real terms during the 1980s. However, the increase was not monotonic and some social expenditures were cut. Most importantly, the wage component often increased while the component for goods and investment (such as for books, schoolrooms and drugs) declined.[19] Moreover, at the end of the 1980s, levels of the Government's social expenditures as a percentage of GDP were still below those reached in the mid-1970s and rather low compared with those of other developing countries.

18 See Donald Rothchild, ed., *Ghana: The Political Economy of Recovery* (Boulder, Colorado, and London, Lynne Rienner Publishers, 1991), pp. 6, 8, 120-121, 163 and 240-242; and John Toye, "Ghana", in Paul Mosley, Jane Harrigan and John Toye, *Aid and Power: the World Bank and Policy-based Lending*, vol. 2 (London and New York, Routledge, 1991), p. 158.

19 For the importance in Ghana of school quality as opposed to years of schooling, see Paul Glewwe, "The relevance of standard estimates of rates of return to schooling for education policy: A critical assessment", *Journal of Development Economics*, vol. 51, No. 2 (December 1996), pp. 267-290; and Ajay Chhibber and Chad Leechor, "From adjustment to growth in sub-Saharan Africa: The lessons of East Asian experience applied to Ghana", *Journal of African Economies*, vol. 4, No. 4 (May 1995), pp. 83-114.

All in all, there had been a considerable rush of deep reforms during much of the 1980s, over a period in which the Government perforce relied upon what was only a small group of highly competent and committed senior officials. Indeed, the inherited situation meant that the Government's technical capacity was extremely stretched. As one author reported:

"PNDC staff members spent a great deal of time compiling data requested by the (International Monetary) Fund, which left little time to draft arguments about the political, administrative, or economic feasibility of measures...the PNDC was so overworked in 1983-84 that it prepared thoroughly on only the multiple exchange rate system adopted in 1983...The team (was) acutely short of support staff and financial and technological resources, and these constraints were only marginally eased by the end of the decade."[20]

A similar sentiment was expressed in another study:

"The middle and lower levels of the civil service provide precious little support for the top team...A particular weakness is failure to undertake preparatory policy analysis, setting out and appraising all relevant policy options. The inevitable result is instant, on-the-spot decision-making by the top leadership...The lack of public debate on policy options intensifies this weakness."[21]

Despite this capacity constraint, the Government did not blindly agree to implement conditions set by the international financial institutions. Disputes arose between the Government and the institutions over several issues. There were also cases in which the Government first implemented measures that subsequently appeared as conditions under an agreement with the Bretton Woods institutions. Examples are cost recovery in the health sector and the introduction of the foreign exchange auctions in 1986.

Moreover, IMF and the World Bank themselves sometimes disagreed on how the balance between fiscal discipline and economic growth objectives should be struck, with IMF insisting on occasion that the view of the World Bank and the Government on how much public investment could be afforded was too optimistic.[22] In any event, during the first phase of the ERP (up to 1987), when IMF took the lead role, the main thrust of the Programme was to achieve macroeconomic stability with fiscal adjustment playing an important part of the strategy.

However, fiscal adjustment required not austerity, but rather the ensuring that fiscal revenues rose faster than expenditures. From the very beginning, the Government also included the rehabilitation of the dilapidated economic and social infrastructure (for example, roads and schools) among its objectives, as it was considered crucial for an output response to the improved pecuniary incentives. Yet, stabilization had priority status during the period.

The Government was also acutely aware of the political dimensions of the sequencing and timing of reforms. The reform of state-owned enterprises, the civil service, and the Cocoa Marketing Board was rather limited during the first period of the ERP. This hesitation may have originated in the socialist background of the Government, opposition within PNDC, and the fear of a political and social reaction to the retrenchments that reforms would undoubtedly involve.[23]

That reforms were needed in these areas was, however, clear. Even before the launch of the ERP, PNDC had criticized the overstaffing at the Cocoa Marketing Board, as the overhead costs kept the producer price for cocoa too low, although the Government resisted privatizing the Board during the 1980s.[24]

20 Matthew Martin, "Negotiating adjustment and external finance: Ghana and the international community, 1982-1989" in *Ghana: The Political Economy of Recovery*, Donald Rothchild, ed. (Boulder, Colorado, and London, Lynne Rienner Publishers, 1991), pp. 236 and 242.

21 John Toye, "Ghana", in Paul Mosley, Jane Harrigan and John Toye, *Aid and Power: the World Bank and Policy-based Lending*, vol. 2 (London and New York, Routledge, 1991), p. 187.

22 See Toye, loc. cit., p. 164; and Martin, loc. cit., p. 238.

23 See E. Gyimah-Boadi, "State-enterprise divestiture: recent Ghanian experiences", in *Ghana: The Political Economy of Recovery*, Donald Rothchild, ed. (Boulder, Colorado, and London, Lynne Rienner Publishers, 1991), pp. 193-208.

24 Toye, loc. cit., pp. 174, 180, 186 and 189-190. On the reforms of the Cocoa Marketing Board, which was renamed Ghana Cocoa Board (COCOBOD), see Food and Agriculture Organization of the United Nations (FAO), *The State of Food and Agriculture, 1994* (Rome, FAO, 1994), pp. 113-114. Private trade in cocoa has been allowed since 1992, under licences issued by COCOBOD, although exporting itself remained a monopoly of COCOBOD.

PNDC was also keenly aware of the drain on the budget by the loss-making state-owned enterprises and of the fact that many state-owned enterprises and the civil service were also overstaffed as a result of the heavy recruitment in the 1970s when cocoa prices had been high. Already in December 1983, the Manpower Utilization Committee had been set up to identify the extent of overstaffing in the public service and to execute redeployment.

In other words, whatever ideas the Government may have had about development strategy and the economic role of the State, the first order of business had to be getting the economy functioning again. This was accomplished. Issues of structural change, downsizing, privatization and the like had to be largely pushed into the second stage of reforms. In particular, it undoubtedly would have been politically difficult had the Government started to retrench people earlier than it did, as the Economic Recovery Programme itself still needed to gain political acceptance both within PNDC and in society at large. The second stage of reform, however, is still a work in progress.

The country remains economically fragile, quite susceptible to terms-of-trade swings and with areas of deep poverty. It has also become dependent on aid flows, and the limited revenue raising power of government has left the budgetary situation delicate. Thus, while civil service salaries had been raised in the early years of the reforms in recognition of the need to adequately remunerate workers if they were to be expected to work diligently, the purchasing power of civil service salaries seriously eroded again over the 1980s. By the early 1990s, after some months of demonstrations, strikes and sporadic violence, and as elections approached in November and December 1992, civil service salaries were raised 80 per cent across the board; but this occurred at the same time as the Government faced lower-than-expected tax receipts from lower cocoa production and prices, lower petroleum tax receipts and sluggish corporate performance. On top of this, there was a shortfall in disbursements of budgeted external concessional finance of about $175 million. This created a new short-term budget adjustment problem and highlighted the need for a more elastic system of taxation.

One result was the substitution of a value-added tax for the sales tax in March 1995. However, the tax had to be withdrawn in June of the same year for further study after riots in May, leading to a number of deaths. Of course, more than a single policy innovation lay behind the strong popular reaction, and this serves to again underline the inescapable political dimension to fiscal policy-making.

The 1997 budget expected a surplus for the year, while also announcing that the value-added tax would be reintroduced in 1998. In 1996, there was a small deficit in the budget of 1.4 per cent of GDP. A surplus had been projected for 1996, but was not realized owing to unanticipated increases in public service salaries and the non-disbursement of $60 million in anticipated foreign grants.

In December 1996, the President was re-elected with a strong vote and his party won a large majority in the National Assembly. In addition to this popular mandate, Ghana seems increasingly to be seen as a possible location for regional offices of international corporations. Not only is this an indicator of how much distance Ghana has traversed, but it would add to the pressure for further raising the effectiveness and transparency of public administration, not

least of all in the area of tax collection. The reformers have an opportunity to push far ahead with fiscal reforms.

WHEN POLITICS RESHAPES THE EXTERNAL ENVIRONMENT: MAKING FISCAL REFORMS IN JORDAN

Sometimes the economic environment in which fiscal policy is determined is shaped in important ways by political forces. Changes in international political relations can provide economic opportunities or impose economic adjustment imperatives that are just as compelling as conventional economic changes, often more so. Usually, when political developments disrupt normal international economic channels, it is unclear how long the disruption will last and thus what type of policy change and how large a change are necessary. The experience of the Hashemite Kingdom of Jordan over almost a decade of fiscal adjustment imperatives well illustrates the challenges of coping with such uncertainties.[25]

Jordan is a relatively small economy with traditionally close ties to the oil-exporting countries of the Persian Gulf region. Throughout most of the 1970s and up to the mid-1980s, the economy depended heavily on those countries both for grants (averaging about 12 per cent of GDP) and for workers' remittances, which constituted the largest source of foreign currency. Growth in GDP averaged about 10 per cent per year in 1973-1983. Investment, both public and private, was high (ranging between 20 and 40 per cent of GDP), although much of the private investment was directed to housing construction (largely financed by Jordanians working abroad). Exports expanded steadily, particularly to Iraq during its eight-year war with the Islamic Republic of Iran. Nevertheless, recourse to foreign and domestic borrowing was quite large, averaging about 10 per cent of GDP per year during the period.

Much of the borrowing served fiscal as well as balance-of-payments needs. Throughout most of this period, fiscal expenditure averaged nearly half of GDP, with public capital expenditure averaging 15 per cent of GDP between 1973 and 1983 and military outlays averaging more than 10 per cent over the same period. There were also heavy expenditures for the development of human resources. In addition, institutional inefficiencies and pricing policies, particularly in the energy and water sectors, imposed a significant burden on the budget. Meanwhile, domestic fiscal revenue rarely exceeded 20 per cent of GDP and was insufficient to finance total expenditure. The system of taxes and tariffs on international trade was rife with inefficiencies, owing to widespread granting of exemptions, complexity of the tax structure, and inadequate collection and administration procedures.[26]

The boom ended in the middle 1980s as a result of the steep drop in international petroleum prices and the subsequent economic recession in neighbouring oil-exporting countries, which reduced foreign grants and remittance inflows from those countries. Coupled with the effect of rising international interest rates on what were in any case burgeoning debt-servicing obligations, considerable pressure was put on the external account and the fiscal position. In 1988, GDP began to fall and central government net borrowing rose to 15 per cent of GDP. By the end of the year, foreign official reserves were virtually exhausted.[27] Moreover, prospects for a return to the more advantageous international economic environment of the earlier years looked exceedingly dim.

25 The case relies in part on the assistance of Jordanian and World Bank authorities, as arranged by the United Nations Development Programme office in Amman, which is gratefully acknowledged.

26 Although the maximum tariff rate for imports was as high as 318 per cent, the bulk of imports was exempted from paying duties; about 30 institutions accounting for over 50 per cent of total imports were exempt from import duties.

27 Reserves (excluding gold holdings and claims on the Central Bank of Iraq) had fallen to about 10-days coverage of imports of goods, services and income (debt-servicing) payments.

In 1989, GDP plummeted 13.5 per cent, consumer prices rose 25 per cent (having been relatively stable in earlier years) and the Government confronted its macroeconomic crisis. It introduced a package of corrective measures as part of a medium-term adjustment programme, supported by a standby arrangement with IMF and a trade and industry adjustment loan from the World Bank. The programme aimed, *inter alia*, to regain a sustainable budget situation by 1993 and end the need for exceptional balance-of-payments financing by 1995. The dinar was devalued, external debt was rescheduled with foreign commercial banks (London Club) and official creditors (Paris Club) and fiscal adjustments began.

The authorities were fully convinced that they had to follow a drastically different economic strategy than in the past. Their plan would be guided by four main principles: first, redefine the role of the State and create a more dynamic private sector; second, reduce dependence on official grants and workers' remittances and develop a more internationally competitive economy with more markets outside the region; third, ensure that the reforms were politically credible to local and foreign private investors, as well as to international financial institutions and agencies; fourth, ensure that the reforms were socially acceptable by explaining to the public the short-term dislocations and long-term benefits and by providing the poorer segments of society with compensatory mechanisms and social safety nets. The main elements of the programme included cutting expenditures and improving fiscal revenues to reduce the budget deficit, reforming the agricultural, water and energy sectors, restructuring the tariff and tax systems, containing the rate of credit expansion within limits consistent with inflation objectives, liberalizing restrictions on foreign exchange and on domestic and foreign investments and harmonizing investment incentives.

Nowhere in the Jordanian adjustment strategy, however, could provision have been made for the events that began in August 1990, when Iraq invaded Kuwait. The initial impact on Jordan entailed both a humanitarian imperative and a need to absorb new economic costs. Hundreds of thousands of third-country nationals quickly crossed into Jordan from Iraq and Kuwait and were assisted first by the Government of Jordan and voluntary organizations and then by the international community once the great scope of the population movement became clear. In two months, over half a million evacuees passed through Jordan on their way to homes elsewhere in the Middle East and Asia, putting extreme pressure on limited local manpower resources and supplies to assist them. On top of the transients, some 300,000 Jordanians and Palestinians returned, increasing the local population by almost 10 per cent. Not only would these people cease being one of the country's main sources of foreign exchange,[28] but they would have to be absorbed into an economy that was deep in economic recession and in the midst of a major fiscal adjustment programme.

Moreover, the Security Council, in its resolution 661 (1990), imposed obligations on Jordan, as on all other countries of the world, to cease international trade with Iraq, except for very limited exceptions, until the situation between Iraq and Kuwait was resolved. While the crisis and embargo imposed economic difficulties on a number of countries, its impact on Jordan was greater than on any other non-combatant country. First, Iraq was Jordan's main trade partner, taking about 20 per cent of its exports. Second, Jordan's port of Aqaba had

28 Indeed, personal bank accounts and other financial assets held in Kuwaiti banks were frozen and converted into Iraqi dinar deposits.

become a major trans-shipment point for Iraqi external trade, accounting for 71 per cent of the volume of imports handled by Aqaba in 1989. Third, the main truck route from Jordan, as well as from the Syrian Arab Republic and Turkey, to Kuwait and Saudi Arabia passed through Iraq and was thus interrupted. Fourth, the tourist industry, a main source of income and employment, ground to a standstill. Fifth, political tensions rose during 1990 between Saudi Arabia and Jordan, as a result of which there was a virtual cut-off of trade with and via that country, and budgeted grant assistance from Saudi Arabia failed to materialize. Sixth, owing to the occupation, budgeted grant assistance from Kuwait itself was not delivered and provision of resources expected for some 14 projects funded by Kuwaiti-based development finance institutions was disrupted. All in all, the losses attributable to the Kuwaiti situation and the embargo on Iraq were put at $1.3 billion in 1990 alone (almost a third of GDP).[29]

While many of the financial costs were offset by additional assistance and while relations with Saudi Arabia improved in 1991, the new economic realities still had to be absorbed by Jordan's economy. With the influx of returnees, for example, unemployment reached 25 per cent in 1991. Within a few years, this indicator would be almost halved. The embargo against Iraq, however, has been far from a temporary disruption. In 1992, Jordan relaunched its adjustment programme, with a new IMF standby arrangement and a new economic reform and development loan from the World Bank.

In the end, Jordan was able to maintain its overall strategy for adjustment. In particular, fiscal deficits fell from over 20 per cent of GDP before the initial programme began to take effect to levels below 6 per cent of GDP since 1992 (see table VII.2). Most importantly, given the context, the Government was able to delay fiscal contraction; that is to say, owing to considerable emergency financial assistance in 1990 and 1991, Jordan was able to provide essential government services and sustain a fiscal deficit that remained above 17 per cent of GDP. In conjunction with the trade responses to the earlier devaluation and other developments, the foreign inflows also helped rebuild foreign exchange reserves. Confidence was maintained in the dinar and after the war a major inflow of savings of the returnees helped fuel a dramatic 16 per cent surge in the growth of GDP in 1992, led by a housing boom. That pace, of course, could not be maintained, but GDP growth has averaged 6.5 per cent a year since.

Jordan's fiscal consolidation could thus take place in an expansionary environment in part because of the substantial financial benefits Jordan received over several years. Very considerable flows began in 1991, mainly from the European Union (the Community as such and several bilateral donors) and Japan. Also, Jordan again rescheduled its Paris Club debt in 1992 and it reduced its commercial bank obligations through "well-executed debt buybacks and debt",[30] followed by a debt and debt-service reduction operation (a "Brady deal") with its bank creditors in 1994. In addition, the United States of America and the United Kingdom of Great Britain and Northern Ireland wrote off about $800 million in Jordanian debt in the wake of the October 1994 peace treaty with Israel (Treaty of Peace between the State of Israel and the Hashemite Kingdom of Jordan, of 26 October 1994.)[31] Reflecting these developments, among others, government interest payments fell from 10.5 per cent of GDP in 1991 to 3.3 per cent in 1995, as may be seen in table VII.2.

29 Estimate of the Special Representative of the Secretary-General, Mr. Jean Ripert, after his mission to Jordan in October 1990 (see "Letter dated 22 October 1990 from the Secretary-General addressed to the President of the Security Council" (S/21938), annex, table 1).

30 World Bank, *Trends in Developing Economies, 1996* (Washington, D.C., 1996), p. 255.

31 Document A/50/73-S/1995/83, enclosure. See Official Records of the Security Council, Fiftieth Year, Supplement for January, February and March 1995, document S/1995/83.

Table VII.2.
CENTRAL GOVERNMENT OPERATIONS OF JORDAN, 1988-1995

Percentage of GDP

	1988	1989	1990	1991	1992	1993	1994	1995
Total revenue	24.0	23.8	27.5	28.2	33.7	30.7	29.2	30.9
Tax revenue, of which:	11.3	11.5	14.8	14.7	18.5	16.6	16.3	16.9
On income and profits	1.9	2.2	4.3	3.3	3.1	3.1	3.2	3.4
On domestic transportation/sales tax	3.5	4.4	4.5	4.6	5.2	5.8	6.4	8.8
On foreign trade	5.2	4.4	4.4	4.8	8.2	6.1	5.2	4.7
Non-tax revenue	12.7	12.3	12.7	13.5	15.2	14.1	12.9	14.0
Current primary expenditure	25.3	28.0	26.2	25.5	22.4	29.0	23.7	26.3
Military	11.4	10.6	9.6	9.4	8.3	8.3	8.5	8.3
Civilian	14.0	17.3	16.6	16.0	14.1	15.7	15.2	18.0
Gross central government saving	-1.3	-4.2	1.3	2.7	11.3	1.7	5.5	4.6
Capital expenditure	9.1	8.3	6.0	5.9	5.8	6.5	6.4	7.5
Net lending and extrabudgetary operations	6.2	-1.4	3.3	3.7	-0.4	-0.6	-0.5	-0.4
Primary balance	-16.7	-11.1	-8.0	-6.8	5.9	0.7	-0.4	1.2
Interest payments	6.8	9.5	10.3	10.5	9.1	6.5	5.5	3.3
Fiscal balance (total financing needed)	-23.5	-20.6	-18.3	-17.4	-3.2	-5.7	-5.9	-5.1
Grants received	8.6	12.8	10.9	8.7	3.9	4.1	3.4	3.7
Fiscal balance (net borrowing needed)	-14.9	-7.8	-7.4	-8.7	0.7	-1.6	-2.5	-1.3

Sources: Jordanian authorities and IMF data.

These financial developments entailed balance-of-payments benefits as well as fiscal ones. Coupled with dynamic export growth to new markets, room was made for significant growth of imports, which were pulled in by the growing domestic economy as well as the effect of liberalized import controls and reduced tariffs. Meanwhile, with lower tariff rates but fewer exemptions and with rising imports, revenue from taxes on foreign trade rose as a share of GDP (see table VII.2). Reforms of the tax system also raised the take on other revenue sources. All in all, tax revenues as a share of GDP have risen by some 6 percentage points since the adjustment period began.

Government expenditures have traditionally loomed large in Jordan's economy. The quality of the services provided by the public sector in Jordan is considered among the best in developing countries, with over 97 per cent of the population having access to electricity and safe drinking water. Other basic

services, such as health and education, are considered generally good, and infrastructure is well developed. The challenge was to maintain – even improve – the services while reducing the cost of government. A number of measures were employed in this regard, including slow growth in salaries, reduced subsidies, less lending to public enterprises and cuts in military spending.

If it can thus be said that the crisis of 1989 has been overcome, it is also the case that additional reforms are in the agenda. While the government deficit has been reduced substantially, it is still at a level that can be sustained only if significant levels of foreign grant inflows are maintained. Ultimately, the Government needs to become self-sustaining. Indeed, additional measures on both the revenue and the expenditure side are under way or expected, including privatization of a number of state assets, as in the energy and agricultural sectors, telecommunications and transport, hotels and cement manufacturing.

Meanwhile, Jordan will once again face adjustment imperatives owing to further changes in its region. In the relatively short run, these are likely to include enhanced competition with Israeli firms in a more open regional economy and loss of seigniorage benefits when the dinar is replaced by a Palestinian currency in the West Bank and Gaza. In the longer run, however, the possibilities for economic dynamism in the region are great and Jordan should be poised to take advantage of them.

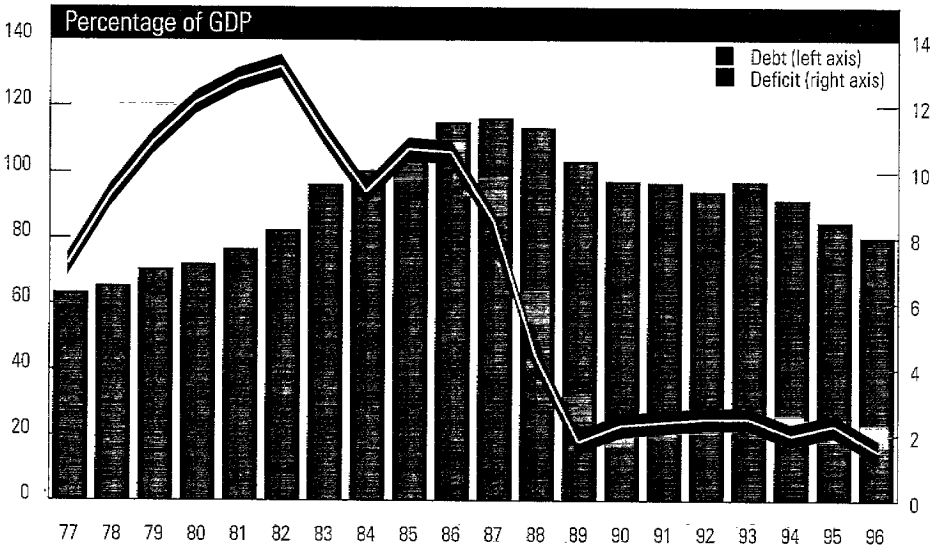
FISCAL CORRECTION WITH ECONOMIC GROWTH: IRELAND BECOMES A "GREEN TIGER"

The difficulties that budget consolidation imposes on the population would be easier to bear (if not necessarily for all affected people), if national incomes and employment were growing rapidly. Typically, however, budget deficit reduction is one dimension of a contractionary stabilization plan. There seems to be a premium on, instead, designing a strategy for cutting budget deficits that would be part and parcel of a strategy for economic growth. In the second half of the 1980s, in part fortuitously, Ireland was able to combine fiscal consolidation with rising GDP growth rates.

In the early 1980s, it had become clear that Ireland's fiscal situation was getting out of hand. When corrective policy began in 1982, the general government deficit had reached 13.2 per cent of GDP. Since 1989, however – although it took most of the decade to accomplish this – the deficit has been on the order of 2 per cent of GDP or less (see figure VII.2). Two distinct three-year periods of fiscal contraction were undertaken: the first, from 1982 to 1984, reduced the deficit by almost 4 percentage points of GDP; the second, from 1987 to 1989, reduced the deficit by almost 7 percentage points of GDP. The second episode was the more successful one in part because it was accompanied by increasingly strong economic growth. Indeed, after a slow period in the early 1990s, strong GDP growth resumed, averaging 8 per cent a year during 1994-1996 and earning Ireland the appellation of "Green Tiger".

Before the consolidation policy began in 1982, it had been preceded by a period of intense national public debate, including three general elections in an 18-month period in 1981 and 1982. In June 1981, a coalition Government took power. The new Taoiseach (Prime Minister), Garrett FitzGerald, later described discovering the true state of the public finances that his Government

Figure VII.2.
GOVERNMENT DEFICIT AND DEBT OF IRELAND, 1977-1996



Source: Data of Organisation for Economic Cooperation and Development (OECD), *Economic Outlook* disks, December 1996.
Note: Data pertain to general government

had inherited with the 1981 budget of the outgoing Government:

> "Unless emergency action was taken, exchequer borrowing was likely to reach 20 per cent of GNP in the current year and almost 21 per cent in 1982. Furthermore – something we could not reveal to the public at that time without prejudicing our ability to borrow the huge sums that would still be needed while we were getting things under control – the Central Bank had turned down in mid-April a request from the Department of Finance for a loan of 350 million pounds."[32]

Thus, the fear of a solvency crisis impelled the search for a fiscal consolidation policy. FitzGerald's Government, however, did not last past January 1982. Three major political parties took office in coalitions or individually in 1981 and 1982 and although each recognized the need for budget consolidation, agreement on a policy package proved difficult.

A set of measures was finally put into effect in 1982 and 1983, however, that aimed to return Ireland, after a period of several years, to the more traditional policy of balancing government current spending against current revenues and borrowing to finance a sustainable capital budget. Most of the budget improvement was sought from increases in tax rates rather than spending cuts. The spending cuts largely took the form of postponement of capital spending. Tax rates were raised in 1981 and 1983,[33] but their effectiveness in raising revenues was dampened by the recession and then-slow economic growth that affected Ireland and many of the developed economies at the time. Nevertheless, tax revenue rose from less than 33 per cent of GDP in 1981 to over 36 per cent – a high watermark of modern Irish taxation burdens – in 1984.[34]

The public-sector borrowing requirement thus began to slowly recede in 1983, although it remained at a high level and so the ratio of public-sector

32 Garrett FitzGerald, *All in a Life* (London, Macmillan, 1991), pp. 366-367.

33 Tax reform, however much needed, was not addressed at that time. Trade unions had organized anti-tax marches since 1975, arguing that there was an unfair tax burden on workers subject to withholding income tax and that too many other members of society escaped their fair share of the tax burden.

34 As per OECD, *Economic Outlook*, No. 60 (December 1996), data diskette.

tions that Irish development policy had sought to attract, but also by Government, financed in part by funds from the European Union Cohesion Fund and other structural funds to which Ireland had access owing to its relatively low GDP per capita compared with the EU average. On top of this, while the 1982-1984 consolidation occurred during a period of real appreciation of the exchange rate, the strong fiscal consolidation of 1987-1989 occurred in a period marked by a roughly 18 per cent real devaluation, as measured by relative unit wage costs in manufacturing, representing an improvement in competitiveness that stretched to an almost 40 per cent gain in this index of competitiveness between 1987 and 1996.[36]

[36] Central Bank of Ireland, *Bulletin* (winter 1996), p. 77.

There was also a limited growth of wage rates in this period, which reflected in part the high rate of unemployment; but it was also very much the result of a sequence of "social compacts". These were, importantly, part and parcel of the fiscal packages. That is to say, since the preparations for the second fiscal consolidation, Ireland has not had British – or United States-style industry – or plant-level collective bargaining. Instead, German-style consensus agreements were pursued that included multi-year national pay arrangements, as well as many of the components of the Government's tax and spending policy. Four agreements of this type were reached, beginning with the 1988 Programme for National Recovery. Each involved trade unions, employers, farmers, the Government and "social pillar" representatives such as the unemployed and religious orders.

In the years since these agreements were introduced in 1988, unit labour costs in the business sector have fallen in four years and, when positive, have never exceeded 4.3 per cent.[37] The first three agreements also limited public-sector pay increases and the salary component in budgets. Increasingly, the agreements have covered not only private- and public-sector pay increases, but also such aspects of fiscal policy as public-sector staffing levels, social welfare payments, tax reform, and so forth.

[37] OECD, *Economic Outlook*, No. 60 (December 1996), p. A16.

An example of the manner in which these agreements melded public- and private-sector incomes policy and fiscal policy can be seen in "Partnership 2000" (the programme for 1997-2000), which calls for, among other things, a 9.25 per cent national public- and private-sector real pay increase over 39 months, a further 2 per cent increase through local-level negotiations tied to restructuring and productivity, an extra 900 million punt in corporate and personal income tax cuts over three years, 525 million punt in additional social inclusion spending, 100 million punt in business tax refunds, a little over 100 million punt in additional farm relief and a target general government deficit of 1.5 per cent of GDP from 1997 to 1999 (well below the Maastricht criterion). As in the previous programmes, the new agreement helped to shape the new budget debate.

Ireland's fiscal consolidation effort has thus spanned a period of some 15 years and has been maintained, if with lapses, by a range of Governments, including minority Governments, coalition Governments and even minority coalition Governments. A need to bring the debt/GDP ratio under control provided the initial impetus for reform. Membership in the European Union has also had several important influences on the consolidation process. The generally shared objective of meeting the Maastricht criteria has helped maintain the process in recent years. The broad range of constituencies represented in

debt to GDP continued to climb (see figure VII.2). Deeper budget adjustments were clearly needed and they began in 1987 shortly after a new report – reflecting the ongoing public debate – had called attention to the precarious nature of the debt-to-GDP ratio and called for a fiscal policy effort to reduce it.[35] The public debt ratio peaked in 1987 at 116 per cent of GDP.

The new initiative cut current and capital expenditures, rather than seek balance mainly through tax increases. This notwithstanding, the tax base was widened, most notably through a tax amnesty which produced 497 million punt in 1988, some 6 per cent of total tax revenue. This brought tax revenue as a share of GDP to its peak level of over 37 per cent of GDP (in 1989 it was down to 34 per cent of GDP). The current budget spending cuts were largely composed of a public-sector pay freeze and control of public-sector staffing levels. In the years since 1989, fiscal policy was made by a succession of coalition Governments which have maintained the broad direction of fiscal improvement.

A crucial difference between the 1987-1989 fiscal episode and the 1982-1984 experience lay in the performance of GDP. The initial consolidation exercise took place during the years after the second surge in oil prices, when the industrialized countries were combating inflationary pressures through tight monetary policies which, *inter alia*, raised real interest rates to high levels, after their having been negative in some cases in the late 1970s. In Ireland, the unemployment rate, which had been edging upward throughout the 1970s, more than doubled from 7.3 per cent in 1980 to 17 per cent, the peak rate, by 1986. GDP fell in that year, but then it grew over 4 per cent in 1987 and 1988 and by more than 6 per cent in 1989.

Despite the growth in GDP, Ireland experienced net declines in employment in 5 of the 10 years of the 1980s. High emigration rather than job creation was responsible for most of the decline in the unemployment rate seen in the late 1980s. However, sustained net job creation began in 1992 and has produced a considerable fall in the unemployment rate, to approximately 12 per cent in 1997, at a time when some other countries that are also candidates for joining the single currency area of the European Union were struggling with rising unemployment.

As Ireland is a very open economy, short-run changes in the growth of GDP are very much a function of international developments. The world economy was relatively buoyant during the period of the second Irish fiscal adjustment in terms of the growth of world output and trade, but there were also some particular developments that benefited Ireland. One was the break in international petroleum prices in 1986, which lowered Ireland's energy costs. A second was declining international interest rates. Long-term German interest rates, which had been over 10 per cent in 1981, declined to 5.8 per cent in 1987, while the Irish spread over German rates fell from 8 points in 1982 to under 1 point by 1991 (it has hovered under 2 points ever since). In addition, in 1986, as part of a general realignment in the Exchange Rate Mechanism of the European Union, Ireland devalued its currency 8 per cent against its main trading partners. Thus, the fiscal contraction begun at the same time as a stimulus to demand was feeding through the economy from these other developments.

The external component of the demand stimulus came at a time when Ireland was becoming increasingly competitive internationally. This was a period of the maturing of large investments, in particular by transnational corpora-

35 National Economic and Social Council, *A Strategy for Development, 1986-1990*, November 1986.

the multi-year national labour and social agreements have produced a forum for discussion on how the burdens of adjustment should be divided. Finally, two further factors have contributed to the success of Ireland as a small open economy – substantial European Union resource transfers and the export boom reflecting the maturation of a long-standing industrial policy of attracting export-oriented foreign direct investment.

PART THREE

SOME DIMENSIONS OF ECONOMIC AND SOCIAL CHANGE

VIII ECONOMICS OF THE NEW TUBERCULOSIS EPIDEMIC*

Tuberculosis has become a global health problem, but one that could easily be resolved if only there existed an international determination to resolve it. From an economic point of view this epidemic is about wasted lives and lost productivity, about the need to organize and finance the health sector efficiently to serve the needs of the population, and about the need to provide for equitable access to appropriate health services. The present chapter reviews the background of the tuberculosis epidemic, as well as its current stage, and then explains why the problem will not disappear by itself. It focuses on the economic and organizational issues of tuberculosis control and recommends new initiatives and strategies to supplement current work in the field.

Public-health programmes such as tuberculosis control can be of great benefit to society provided they are well conceived and well executed. If control of endemic disease is not regarded as a public good and treated accordingly, society at large suffers the negative consequences of private decisions that affect people across national boundaries.

Throughout this chapter, the term "tuberculosis" is used as a synonym for "pulmonary tuberculosis", which denotes the most prevalent type of tuberculosis by far.

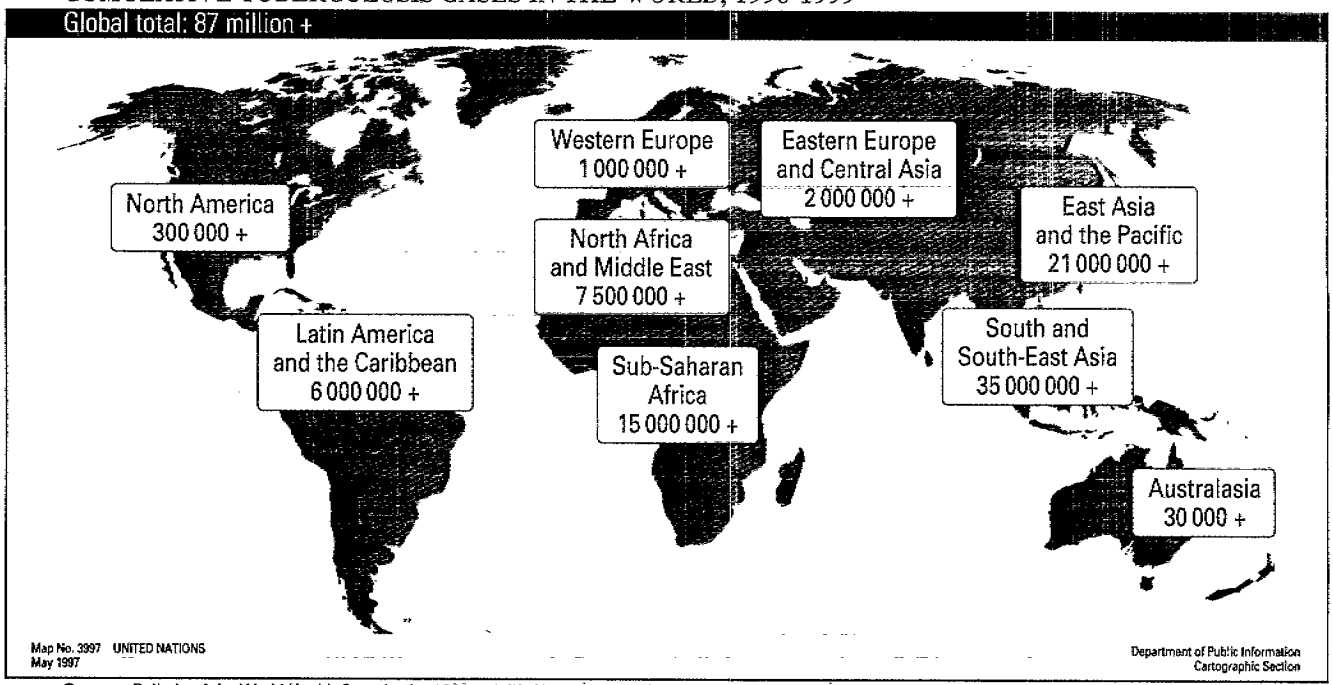
THE PROBLEM TODAY AND IN THE NEAR FUTURE

Tuberculosis claims the lives of 2 million to 3 million people each year and accounts for about 4-5 per cent of deaths globally. Almost 90 million people are expected to contract the disease in the 1990s and, assuming no change in treatment coverage, 30 million will die (see figures VIII.1 and VIII.2). The vast majority of the victims (80 per cent) are in the economically productive age group 15-49. Poverty in itself does not cause tuberculosis, but there is a strong connection: 95 per cent of infected people live in and 98 per cent of deaths occur in low-income countries. South Asia registers the highest incidence of the disease, and tuberculosis is on the rise there owing to increasing numbers infected with human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS), and to the ineffectiveness of current programmes to combat tuberculosis.

Researchers in India recently studied the socio-economic status of patients with tuberculosis. They found tuberculosis to be most prevalent among the poorer strata of the population, although the better-off are not immune from the

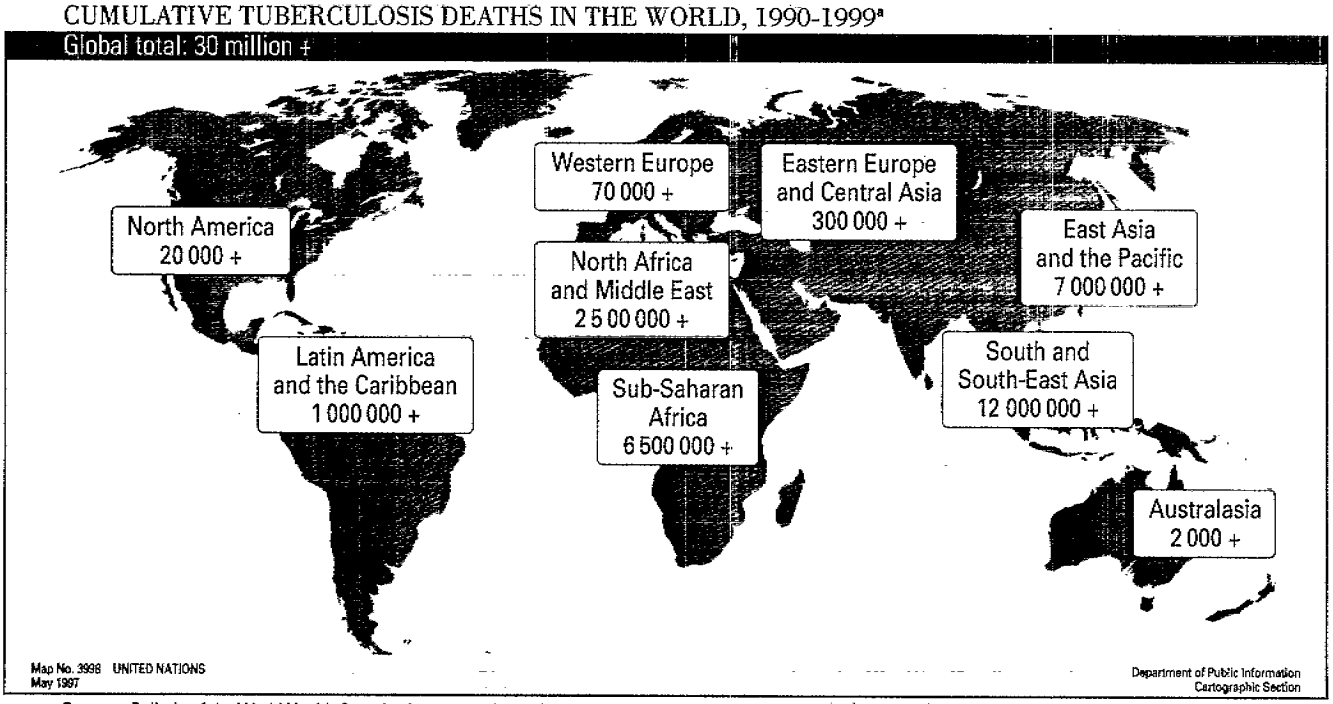
* The present chapter was prepared in close cooperation with the World Health Organization, which took a lead role in its preparation, and whose assistance is gratefully acknowledged.

Figure VIII.1.
CUMULATIVE TUBERCULOSIS CASES IN THE WORLD, 1990-1999[a]



Source: *Bulletin of the World Health Organization* 1994, vol. 72, No. 2, p. 218.
[a] WHO projections, assuming no change in treatment coverage.

Figure VIII.2.
CUMULATIVE TUBERCULOSIS DEATHS IN THE WORLD, 1990-1999[a]



Source: *Bulletin of the World Health Organization* 1994, vol. 72, No. 2, p. 219.
[a] WHO projections, assuming no change in treatment coverage.

disease. Tuberculosis was also found to be more common among people in improvised dwellings in urban areas than among those who live in more substantial structures. The Indian survey found the highest incidence of tuberculosis among people with no schooling.[1]

Even though it is adults in the prime of life who are most affected by tuberculosis, children are not immune from the disease. Indeed, approximately 1.3 million cases and 450,000 deaths from tuberculosis are recorded each year in developing countries for children younger than 15 years of age.[2] For children and young adults, the incidence of tuberculosis is similar for males and females; after the late twenties, it is higher in males. However, studies comparing passive case-finding (patients' presenting themselves to a health institution) with active case-finding (screening of the general public) reveal that with the passive approach tuberculosis is less apt to be detected in women by public authorities. A Nepalese study found that females made up 28 per cent of cases who referred themselves to a clinic whereas with active case-finding the percentage rose to 46 per cent. In addition, there is evidence that women of reproductive age progress faster from infection to disease than do men of the same age group.[3]

A small but vulnerable group of people – refugees and displaced persons – calls for special attention. The Office of the United Nations High Commissioner for Refugees (UNHCR) in 1995 estimated the number of refugees to be more than 25 million people, in addition to a similar number of displaced people, and their numbers are steadily rising. Ninety-one per cent of the refugees and displaced persons live in developing countries of Africa, Asia and Latin America. Tuberculosis is an important health problem and a leading cause of death among adults in refugee camps. The World Health Organization (WHO) recommends that tuberculosis should become a health priority once the emergency phase of a refugee situation is over.

In most countries of Eastern Europe and the former Union of Soviet Socialist Republics (USSR), the incidence of tuberculosis was higher than in Western Europe in 1990-1992. Moreover, poor treatment or a complete lack of treatment in some of these countries has caused the rate of infection to climb still higher, as in Romania and Kazakstan. One of the obstacles to curing the disease is an insufficient and/or erratic drug supply.[4]

The global problem of tuberculosis is immense when measured in terms of mortality and morbidity; consequently its socio-economic impact is significant. In terms of social and economic burden, in the year 1990 tuberculosis ranked as the seventh most important disease in the world and the fifth most important in the developing world. A recent study projects that tuberculosis will retain this rank among leading diseases until the year 2020 (baseline scenario).[5]

The spread of the disease

Tuberculosis is caused by the bacillus *Mycobacterium tuberculosis* which in most cases attacks the lungs. Infection is typically transmitted from persons with pulmonary tuberculosis to other persons through coughing or sneezing. Only about 5-10 per cent of those infected with the tuberculosis bacilli develop clinical disease. In 80 per cent of such cases, clinical tuberculosis develops within two to five years of infection. Half of infected adults who develop the

1 V. Pathania and others, "The socio-economic status of TB patients in India", unpublished paper (Geneva, WHO, circa 1996).

2 M. C. Raviglione, D. E. Snider and A. Kochi, "Global epidemiology of tuberculosis: morbidity and mortality of a worldwide epidemic", *Journal of the American Medical Association*, vol. 273, No. 3 (1995), pp. 220-226.

3 C. B. Holmes, H. Hausler and P. Nunn, "Sex, gender and the epidemiology of tuberculosis", unpublished paper (Geneva, WHO, circa 1996).

4 M. C. Raviglione and others, "Tuberculosis trends in eastern Europe and the former USSR", *Tubercle and Lung Disease*, vol. 75 (1994), pp. 400-416.

5 Christopher J. L. Murray and Alan D. Lopez, eds., *The Global Burden of Disease: A Comprehensive Assessment of Mortality and Disability from Diseases, Injuries, and Risk Factors in 1990 and Projected to 2020* (Cambridge, Massachusetts, Harvard University Press, 1996).

disease are smear-positive patients (their sputa contain sufficient numbers of bacilli to be detected by microscopy); they are the source of infection in the community. In the absence of adequate treatment, an untreated smear-positive person might infect, on average, 10-15 persons per year.

Given that the source of infection is thus a smear-positive person, tuberculosis can be controlled with existing technology because the infectious agent resides almost exclusively in the infected person, who can be quickly rendered non-infectious. Nonetheless, inappropriate treatment of tuberculosis can lead to continued disease and to the development of drug-resistant tuberculosis. Drug-resistance is not only a threat to the developing world but a worldwide problem whose global magnitude is not yet well appreciated.[6] The highest rates of multi drug resistant tuberculosis (disease resistant to two of the most important anti-tuberculosis drugs in use) have been reported in Nepal (48 per cent); Gujarat, India (34 per cent); New York City (30 per cent); Bolivia (15 per cent); and the Republic of Korea (14.5 per cent). Poor or suboptimal tuberculosis control programmes can lead to rapid emergence of drug resistance.

An infectious person who is drug-resistant infects others with bacilli that are also drug-resistant, thus starting a deadly chain. In developing countries, the problem is especially severe because most of the drug-resistant cases cannot be cured and alternative drugs are not affordable.

Tuberculosis has become a more pressing problem with the appearance of the HIV/AIDS epidemic. With HIV infection present, those infected with tuberculosis progress more quickly to the clinical disease stage, because their weak immune systems allow bacteria to develop unchecked. HIV results in:

a Reactivation of latent tuberculosis with a high fatality rate;

b New infection and rapid progress to active tuberculosis with high death rates;

c Transmission of tuberculosis from dually (HIV and tuberculosis) infected individuals to the general population.

For these reasons the spread of HIV/AIDS is associated with an increase in the incidence of tuberculosis.

If a person without HIV in a developing country becomes ill with tuberculosis, he or she can be easily cured with effective treatment and can thus recover normal health. A person with HIV is 30 times more likely to develop tuberculosis than a person without HIV and, if left untreated, can expect to survive on average only five to six weeks. However, a person infected with both HIV and tuberculosis can be treated effectively for tuberculosis, gaining on average an additional two to three years of life.

The lethal connection between tuberculosis and HIV is reflected in the high incidence of tuberculosis in HIV-infected persons (40-54 per cent in sub-Saharan Africa).[7] These figures vary according to the spread of HIV; in a number of sub-Saharan African countries such as Uganda and Zambia, tuberculosis is found in a large percentage of HIV-infected persons; this is not the case in countries such as India, which has a large population infected with tuberculosis but relatively few cases of HIV. HIV infection is increasing in India, however, and this can be expected to increase the already high incidence of tuberculosis in the country.

6 D. L. Cohn, F. Bustreo and M. C. Raviglione, "Drug-resistant tuberculosis: review of the worldwide situation and the WHO/IUATLD Global Surveillance Project", *Clinical Infectious Diseases*, vol. 24, Supplement 1 (1997), pp. 21-130.

7 K. Cock and others, "Tuberculosis and HIV infection in sub-Saharan Africa", *Journal of the American Medical Association*, No. 268 (1992), pp. 1,581-1,587.

Initiatives taken in recent years

In the industrialized world, tuberculosis mortality has been declining since the beginning of this century. Improvements in socio-economic conditions and in hygiene, as well as the practice of isolating infectious cases in sanatoriums, have helped to contain the spread of the disease. The introduction of anti-tuberculosis drugs in 1954 gave hope that tuberculosis could be effectively controlled if not eradicated. Since then, a variety of chemotherapeutic agents have been developed. Today, WHO and the International Union against Tuberculosis and Lung Disease (IUATLD) recommend four drugs for multi-drug treatment.

In the case of tuberculosis, unlike that of other infectious diseases such as poliomyelitis and measles, there is no effective way to prevent its occurrence in adults. As a consequence, the only way to prevent new cases is to cure those already infected with tuberculosis. A vaccine does exist for infants and is widely used throughout the world, often as part of the Extended Programme on Immunization (EPI). It is the bacillus Calmette-Guérin (BCG) vaccine, which was developed in the beginning of this century. There is no consensus regarding the effectiveness of BCG, but most authorities grant that BCG is between 40 and 70 per cent effective in preventing tuberculosis in children from birth through age 14 when the vaccine is administered at birth.[8]

The principle problems with the standard practices developed in the 1950s were that, first, the drugs had to be taken over a period of 12-18 months and, second, administration of the medicine was left in the hands of the individual patient. As a result, many patients dropped the treatment or failed to take their drugs regularly and thus became chronic cases. The patients treated ineffectively did not necessarily die from tuberculosis – in fact many enjoyed a long life; but the community lost because of an increase in the number of sources of tuberculosis infection.

The solution to this problem as perceived by experts was to develop a medically supervised short-course form of chemotherapy. A field study of such a short-course cure was carried out in Africa in the 1980s, revealing a significant improvement in cure rates.[9]

In the 1990s, the WHO strategy for fighting tuberculosis has been DOTS (directly observed treatment, short-course), a form of chemotherapy which lasts six months, and is supervised and monitored by health professionals. It is designed to overcome shortcomings of earlier treatments, such as low cure rates, high relapse rates, high fatality rates, and drug resistance. The essential features of DOTS are:

a Placing of top-level political commitment behind a well-designed and managed programme in order to secure adequate and regular funding;
b An uninterrupted supply of drugs reaching even the most remote health centre;
c Staff training and education at all levels down to the front-line health worker;
d Direct observation of the individual patient taking the tuberculosis drugs;
e A health system that maintains a rigorous system of recording and reporting on patient progress in order to ensure that powerful anti-tuberculosis drugs are used properly.

8 C. Murray, K. Styblo and A. Rouillon, "Tuberculosis", in *Disease Control Priorities in Developing Countries*, D.T. Jamison and others, eds. (New York, Oxford Medical Publications, 1993), pp. 233-259.

9 K. Styblo, "The national tuberculosis/leprosy programme in Tanzania", document WHO/TB/88.153 (Geneva, World Health Organization, 1988).

The DOTS strategy makes the health system – not the patient – responsible for successful treatment and for verifying that a cure has been achieved. This is critical, as most tuberculosis patients start to feel better after just a few weeks of medication and are tempted to stop therapy.

If this strategy is followed, a patient with infectious pulmonary tuberculosis will cease to be infectious within two to six weeks. With the DOTS strategy, the health worker is supported by a central management unit that ensures that the programme is functioning and that the necessary infrastructure is in place. The targets suggested for achievement by those countries that adopt the DOTS strategy are a detection rate of 70 per cent and a cure rate of 85 per cent. Although China is an excellent example of success achieved with this strategy (see box VIII.1), other countries with a high incidence of tuberculosis, such as India, still have a long way to go.

When patients take tuberculosis drugs it must be ensured that they take at least four effective drugs in the initial phase and two in the continuation phase. To achieve success (high cure rates and a minimum of drug-resistance) with the DOTS strategy, some countries package all drugs in "combipacks". However, while this packaging does simplify the dispensing of medication and may increase compliance, the possibility remains that, as many pills must be taken, certain drugs may be selectively omitted. Fixed drug combinations minimize the opportunity for a patient, provider or programme to selectively reduce or eliminate one or two medications from the treatment regimen, and remove the risk of multi drug resistant tuberculosis if treatment is stopped for any reason.

According to WHO, DOTS achieves the greatest results in controlling tuberculosis where:

a Incidence is high;
b Population is large;
c Non-DOTS is operating ineffectively;
d DOTS coverage is currently low.

In India, all of these elements are present, and the country has much to gain from implementation of DOTS. It is estimated that 2.3 million people each year require treatment for tuberculosis in India, and that the cure rate is only 35 per cent.[10]

An important part of the DOTS strategy is establishment of the necessary infrastructure (such as a supply of effective drugs) and appropriate education of health workers. It is not enough to make drugs available, although in some countries this is a major problem in itself; health workers must be able to understand how to restore a patient's health and how to achieve a cure. The expertise necessary to cure patients suffering from tuberculosis must be transferred to the level responsible for the first contact with the patient, and instructions must be provided to the patient in a way that is understandable to him or to her.

Stopping the epidemic

Medical practitioners have for many years been able to treat tuberculosis with considerable success, and short-course chemotherapy combined with other elements in the DOTS strategy has improved the effectiveness of this treatment. Improved cure rates should lead to a global reduction in the number of persons with tuberculosis. The epidemic, however, has not ceased; on the

10 World Bank, South Asia Country Department II, Population and Human Resources Operations Division, "Staff appraisal report, India, proposed tuberculosis control project", Report No. 15894-IN, 6 January 1997.

Box VIII.1.

IMPLEMENTATION OF THE DOTS STRATEGY IN CHINA

During the cultural revolution (1965-1976), tuberculosis control was not a health priority in China. In the early 1980s, a National Tuberculosis Programme (NTP) was re-established. Some progress was made, but after financial reforms were implemented in 1982, the costs of tuberculosis treatment became the responsibility of the patient or his insurer, thus making treatment dependent on the ability to pay. As a consequence, some provinces experienced stagnation or increases in the prevalence of the disease. Despite considerable progress, tuberculosis thus remained an important health problem in China: 6 million people were estimated to have active pulmonary tuberculosis; the disease was the most important single cause of premature mortality, with an average of 360,000 deaths each year.

Against this background, China and the World Bank reached an agreement for implementation of a national tuberculosis control programme in selected provinces during the period 1992-1998. The programme encompassed two goals: (a) to immediately increase cure rates, and reduce transmission through an effective programme of control; and (b) to improve the ability of the Chinese health services to implement future disease control programmes and to sustain progress already made.

By March of 1996, the following results had been achieved:

a Five hundred and fifty-three million people -- nearly half the population of China -- were covered by the programme;
b Cure plus treatment completion rates were 94 per cent for new cases and 90 per cent for re-treatment, compared with a cure rate of only 52 per cent reported for the whole country in 1980.

The main features of the programme that account for its success have involved:

a Instituting a vertical organization that integrates a strengthened central tuberculosis control unit with primary health care services at the village and township levels;
b Targeting smear-positive cases, which are the most infectious;
c Adopting the principle of passive case detection, through which health workers detect new cases of tuberculosis among those who present themselves with complaints symptomatic of the disease, rather than actively search for new cases by randomly screening the entire population;
d Screening cases by fluoroscopy because the expertise for this method was already available;
e Adopting the WHO strategy of DOTS (directly observed treatment, short-course), with the village doctor as supervisor of the initial phase of therapy;
f Restructuring the organization and finance of public-health services in support of principles a-e.[a]

[a] For more detail, see T. Harrison, "Tuberculosis control in China: a case study of the infectious and endemic disease control project (tuberculosis component)", document WHO/TB/96.215 (Geneva, WHO, 1996); and World Bank, Environment, Human Resources and Urban Development Operations Division, Country Department III, Asia Regional Office, "Infectious and endemic disease control project", Staff Appraisal Report, No. 9894-CHA, 1991.

contrary, the number of persons infected with tuberculosis is expected to increase to 10 million cases and lead to 3 million deaths in the year 2000 if radical changes in treatment are not introduced. There are a number of reasons for this; in order of importance, they are:

a Inadequate tuberculosis programmes, leaving patients without a cure;
b Increase in the number of cases of HIV which fosters the spread of tuberculosis;
c Deterioration of public-health services in a number of countries.

In a number of developing countries, inadequate tuberculosis programmes fail to cure patients either because they provide no relevant treatment at all (owing, for example, to a lack of drugs) or because they provide the wrong treatment. A study in Bombay has shown that private practitioners who treat

tuberculosis in that city use 80 different drugs, only 4 of which are effective against tuberculosis when used in the prescribed combination.[11]

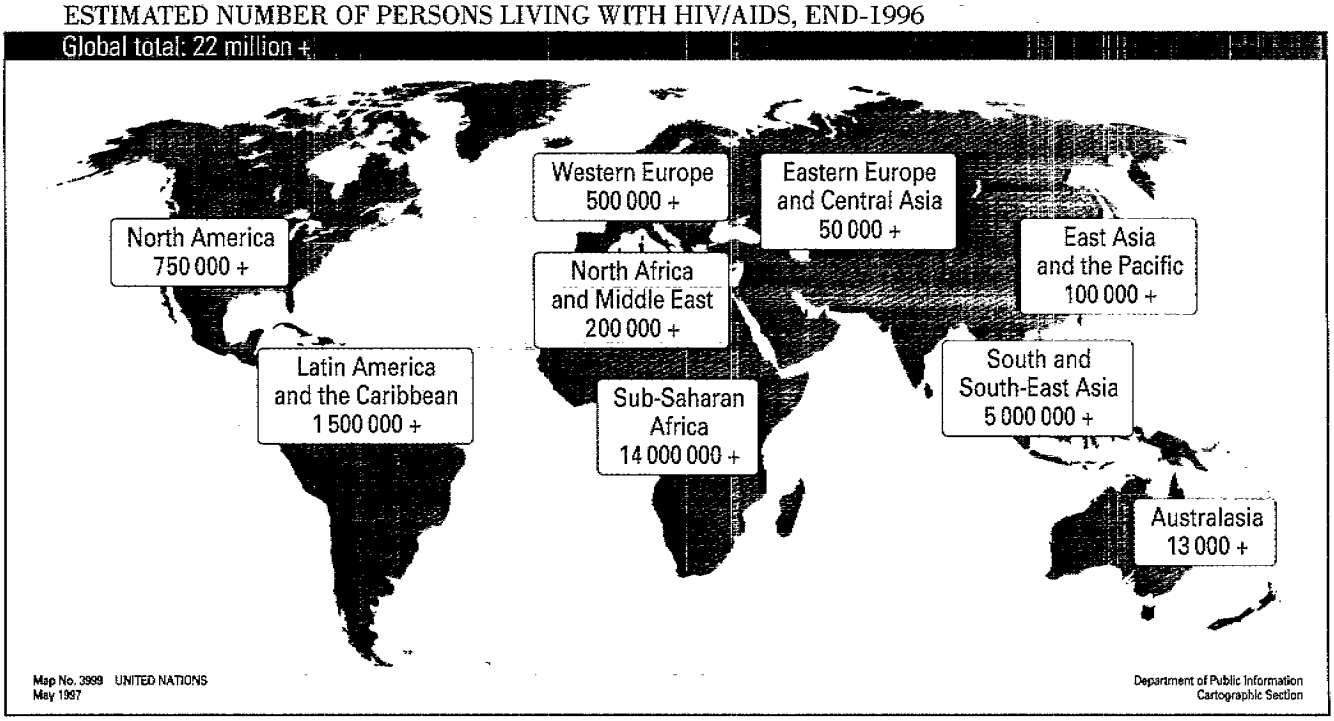
[11] C. A. K. Yesudikan, "Behaviour of the private sector in the health market of Bombay", *Health Policy and Planning*, vol. 9, No. 1 (1994), pp. 72-80.

In 1990, 4 per cent of all tuberculosis cases, equal to 0.3 million people, were attributable to HIV infection. By the year 2000, this proportion is expected to increase to 14 per cent of all tuberculosis cases. The Joint United Nations Programme on HIV/AIDS (UNAIDS) estimates the number of persons living with HIV/AIDS at the end of 1996 to have been 22.6 million, 14 million of whom were in sub-Saharan Africa (see figure VIII.3). The incidence of HIV is increasing, especially in Asia, which has the highest proportion of tuberculosis cases. India alone is expected to have 250,000 new HIV-related tuberculosis cases each year by the year 2000. HIV will thus be an increasingly important factor in the spread of tuberculosis.

Industrialized countries have assumed for years that tuberculosis is not a major health issue and does not constitute a threat to their population. This, however, is no longer entirely true. It is now clear, especially in the United States of America, that health authorities must take drug-resistant tuberculosis seriously. In the former Soviet Union and in some countries of Central and Eastern Europe, economic decline has had a profound impact on national health services, including treatment of tuberculosis. The general deterioration of the health-care system has allowed tuberculosis to become an epidemic once again.

In developing countries, the problem of drug delivery has been debated for years and provides the main rationale for vertical health programmes whose sole objective is to secure and distribute essential drugs. Countries and parts

Figure VIII.3.
ESTIMATED NUMBER OF PERSONS LIVING WITH HIV/AIDS, END-1996



Source: Joint United Nations Programme on HIV/AIDS (UNAIDS).

of countries still exist where drug delivery is erratic and hampers the return to a healthy life for many people, including those infected with tuberculosis. Few developing countries have a well-functioning national tuberculosis programme to support the primary health system by ensuring a supply of drugs, diagnostic equipment, trained staff, and recording and reporting systems. Some countries have introduced user charges for drugs in an attempt to recover costs. If the poor are not exempted (or the tuberculosis drug packages are not delivered to them free of charge), they do not have effective access to tuberculosis treatment. The strong connection between poverty and tuberculosis means that this is of great concern from both an equity and a public-health point of view.

Obstacles to control of tuberculosis are many, especially because of the connection between tuberculosis and HIV. Effective drugs that can cure tuberculosis patients have been available for decades, but the world is only now beginning to implement a second wave of technology, namely the DOTS strategy, to overcome obstacles to effective treatment and halt the spread of this disease.

In both industrialized and developing countries, the first step towards a solution to this epidemic is to realize the magnitude of the problem and then to mobilize decision makers who are able to give it high priority. Commitment of health service workers is not enough. Commitment is also required by decision makers who control the budget, for commitment without allocation of funds cannot produce the desired results.

More research is needed to provide policy makers with the information required for informed decisions regarding, for example, the preferences of patients and what causes them to interupt treatment. A short-course treatment lasts six months but provides considerable relief in a few weeks; it may be the case, however, that a poor peasant is concerned with obtaining not a cure but rather only enough relief to allow him to become productively employed once again.

It is a generally accepted fact that even in poor countries it is essential that health services include treatment of tuberculosis. However, health systems are not always perfect. Political will to address the problem by giving it priority, for example by adopting the DOTS strategy, and to allocate the necessary resources is a prerequisite of ending the epidemic. A number of countries have adopted or are beginning to adopt the WHO strategy of DOTS. If others follow in their wake and the strategy achieves high cure rates, the epidemic might eventually be stopped.

A common obstacle preventing successful implementation of tuberculosis programmes is the overall organization and finance of health services. Health services are the responsibility of government in each individual country, and they are vital to the support of tuberculosis control programmes. If problems of the organization, finance and delivery of health services are not dealt with in an appropriate manner, a tuberculosis programme might fail. Problems that may have to be considered include user charges for tuberculosis drugs, long travel distances to an appropriate health facility, and lack of cooperation or regulation of the private sector.

The Revised National Tuberculosis Control Programme adopted by India in 1992 is intended to last 8-12 years. To improve detection and treatment of the disease, the Programme takes into account private physicians, who perform an important role in the care of tuberculosis patients. In India, there is a long tradition of tuberculosis-infectious patients' going first to a private clinic rather

than to a government health centre. Unfortunately, however, private providers in India do not keep records, nor do they monitor the progress and outcomes of their patients. It has been estimated that tuberculosis patients in India today spend more than $100 million per year on tuberculosis care, but this buys them at most relief rather than a cure.[12] If the Revised National Tuberculosis Control Programme of India is to succeed, the behaviour and practices of private, for-profit physicians must be changed. Effective incentive measures implemented to make it profitable for private physicians to cure patients rather than alleviate symptoms.

In the public sector, the commitment of a well-trained staff is necessary in order for a tuberculosis programme to succeed. Regardless of whether the tuberculosis control programme is carried out solely by the public sector or as a public/private mix, commitment on the part of civil servants is essential. Incentives are useful in securing a high quality of services in the public sector. Public-health workers can be paid bonuses for number of cured patients and for low-drug resistance; but unless such incentives are based on reliable data and regular reviews, they will not be effective.

Decentralization of public-health services and allocation of financial responsibility to local Governments can result in serious problems for a supervisory system such as a national tuberculosis control programme. Brazil, for example, has experienced severe difficulties with its programme because of decentralization (see box VIII.2). Health programmes are vulnerable to changes in organization and finance; what appears to be an efficient, cost-reducing innovation may, in practice, turn out to have undesired and severe side effects.

ECONOMICS AND TUBERCULOSIS CONTROL

Economists view health care as a combination of goods and services that the patient acting as a consumer considers desirable insofar as he or she expects the consumption of these goods and services to contribute to improved health and quality of life. For this reason the consumer/patient is willing to sacrifice what is often a large portion of the family budget in order to obtain health care.[13]

Health care differs from most consumer expenditure, however. It has three attributes that call for special attention from a policy point of view:

a Uncertainty regarding incidence of illness;

b External effects in consumption;

c Asymmetry between provider and user in respect of information.

Any one of these is the basis of a valid argument for government intervention and perhaps for introduction of public health care to replace or supplement private care. The rationale for public health care is that market failure in health-care services has large negative consequences for society if government does not intervene.[14]

The future health of any individual is uncertain. Consequently, a person cannot predict when he or she is going to need health care. Demand for health care is uncertain and therefore the expenditures required for health care are also uncertain. An institutional response to uncertainty is the introduction of some form of insurance, either public insurance financed by taxes or private insurance financed by premiums. If the poor cannot afford to pay the premiums

12 C. Holmes, V. Pathania and J. Almeida, "The impact of tuberculosis on individuals and households in India", unpublished paper (Geneva, Global Tuberculosis Programme (GTP)/WHO, circa 1996).

13 Robert G. Evans, *Strained Mercy: The Economics of Canadian Health Care* (Toronto, Butterworths, 1984).

14 For more general considerations of market failure arguments for state intervention in the economy, see chap. V.

Box VIII.2.

TUBERCULOSIS CONTROL IN BRAZIL

Between 1970 and 1990, the morbidity and mortality of tuberculosis decreased in Brazil. The deterioration of the tuberculosis programme that began in 1990, combined with the spread of HIV/AIDS, now threatens to reverse this downward trend. The decentralization of services to the municipality level started in 1988. The idea behind the reorganization was to bring general health care closer to the patients. This did not happen. Tuberculosis control for the most part was left out of the decentralization process, and few municipalities provided tuberculosis services.[a] A number of factors accounting for this outcome are described below:

- **a** Bureaucrats at the central level gave low priority to tuberculosis;
- **b** Staff of the tuberculosis control programme at the central level were unable to adjust easily to a decentralized system;
- **c** Adequate guidelines and training materials were absent;
- **d** Some municipalities demonstrated a limited ability to take on new responsibilities;
- **e** The fact that public funds were allocated to municipalities in proportion to health services provided left public-health programmes such as tuberculosis control at a disadvantage;
- **f** The fact that many patients chose emergency outpatient services as their first contact with medical services contributed to poor case detection.

[a] See WHO, "Tuberculosis programme review: Brazil", document WHO/TB/95.191 (Geneva, July 1994).

to insure the availability of health care when required, there is then a case to be made for some sort of government subsidy or intervention.

Consumption of health care may have positive effects on the well-being of others. Every member of society has an interest in controlling an infectious disease like tuberculosis: when my friend is healthy (free of tuberculosis), the probability that I myself might contract tuberculosis is much smaller than when my friend is infected. In such a situation, private market mechanisms of resource allocation fail in the sense that they lead to under consumption of the service in question. There is no market in which those affected by the primary consumer's consumption can register their preferences. Actions that promote health for one individual and at the same time create positive effects for others, as is the case with control of contagious diseases, are referred to Pnalities. These externalities result in market failure.

Health is not an ordinary commodity, even though good health is indispensable for enjoyment of life. The consumer/patient desires good health, but it takes a clinical expert to judge the need for health care. Because of this asymmetry between provider and consumer in respect of information, consumers can be exploited by sellers of health care, including sellers of tuberculosis treatments. In India, for example, private clinics submit tuberculosis patients undergoing chemotherapy to weekly X-rays, an unnecessary practice that adds to the cost of treatment.[15] Market failure of this type is common in the health-care industry and leads to an inefficient use of resources.

The market for health care has other characteristics as well that justify government action. Many parties bear the costs of an epidemic like tuberculosis: the state treasury because of lost tax revenue due to the illness and early death of a person in the prime of life, health services that are forced to divert resources from other activities (such as prevention of HIV) to the diagnosis and treatment of tuberculosis, and – not least – the patient undergoing treatment and his or her family who suffer loss of income and might be in debt for years in the absence of adequate insurance (public or private).

[15] V. Pathania, J. Almeida and A. Kochi, "The behaviour and interaction of TB patients and private for-profit health care providers in India: a review", unpublished paper (Geneva, GTP/WHO, circa 1996).

The costs of tuberculosis

The costs of tuberculosis fall into three groups:

a Direct costs of treatment:
  i To the health services;
  ii To the patient and his family (for example, payment for drugs and transportation);
b Non-treatment costs to society/community/family;
c Intangible costs (pain, suffering, grief).

It is important to consider all three types of costs in estimates of the total cost of tuberculosis to society. All too often decision makers consider only costs to the health system, neglecting the costs borne by the patient and his family. For this reason they find it difficult to comprehend that a patient might voluntarily stop treatment.

Tuberculosis imposes high costs on society in part because the disease disproportionately affects people in their productive adult years. Many of those infected are heads of households and/or parents. Furthermore, tuberculosis decreases the (already short) life expectancy of HIV infected persons. The number of disability-adjusted life years (DALYs) lost in 1990 in developing countries because of tuberculosis is estimated to have been 37.9 million for adults.[16] The number of tuberculosis cases has increased since then, so the present toll may well be on the order of 40 million adult DALYs each year. Tuberculosis ranks as the fifth most important cause of lost DALYs in developing countries, and the seventh most important cause for the world as a whole.

The harm to relatives that results when the head of a family becomes ill with tuberculosis is clearly demonstrated in the case of India where tuberculosis is the second most important cause of death among adults. When a husband becomes ill from tuberculosis, his wife cares for him and often accompanies him in his search for health care and treatment. She might be forced to enter the labour market in order to replace some of the lost household income, although full-time work is generally not possible. Time spent on earning income comes at a sacrifice of household activities such as childcare. In addition, women are known to become infected during their husband's disease. If the wife fails to earn enough income herself, the loss of income formerly earned by the head of the family can lead to malnutrition and morbidity among the children. Older children may also have to go to work: for example, it is common for poor families in India to supplement household income with the proceeds of child labour. In rural areas, many elderly family members are often severely affected as well, depending on their ability to generate income, when the breadwinner of the family becomes ill.[17]

The magnitude of this indirect cost has been estimated in Thailand to be two months of lost income, on average, for each diagnosed and treated patient. In contrast, patients who are never diagnosed or treated lose, on average, a full year of work. This estimate does not include, however, the time that patients spend in many countries shopping around among providers before they are finally diagnosed. The figures from Thailand should therefore be regarded as a minimum estimate of lost income for treated patients.[18]

16 J. L. Bobadilla and others, "Design, content and financing of an essential national package of health services", *Global Comparative Assessments in the Health Sector: Disease Burden, Expenditures and Intervention Packages*, C. Murray and A. D. Lopez, eds. (Geneva, WHO, 1994), pp. 171-180. DALYs represent the sum of years lost from premature death plus years lost because of disability associated with the disease.

17 C. Holmes, V. Pathania and J. Almeida, "The impact of tuberculosis on individuals and households in India", unpublished paper (Geneva, GTP/WHO, circa 1996).

18 H. Sawert and others, "Costs and benefits of improving tuberculosis control: the case of Thailand", unpublished paper (Geneva, GTB/TRS, WHO, circa 1996).

The direct costs to health services (private or public) are the costs involved in diagnosing, treating and controlling tuberculosis. In each individual country, these costs vary according to the services provided, the prices of the services involved, and the organization of health care (economics of scale, capacity, cost-recovery schemes). However, the total costs to health care are to a certain degree dependent on the effectiveness of tuberculosis services: the detection rate and the cure rate. The greater the number of infected persons who are detected and cured, the smaller will be both the number who require re-treatment and the number who transmit the infection to other members of society.

The direct costs of tuberculosis to the health system have been calculated in a number of studies for various countries over the last 10 years.[19] Focusing solely on the provider costs involved in carrying out short-course chemotherapy at a cure rate between 70 and 90 per cent, these vary in today's prices from $100 to $150 per patient cured. An older study from the 1980s of Malawi, Mozambique and the United Republic of Tanzania reports calculations of $82-$111 per patient cured.[20] The costs included by the researchers are sputum examination, drugs, stationery, health education, supervision, initial examination of outpatients and follow-up.

The direct costs borne by patients are more difficult to deduce from the present literature, and vary depending on user charges and distance to the nearest health centre. User charges for drugs, outpatient services and even diagnostic services and hospital stays have been introduced in order to finance health services. In the case of India's private clinics, out-of-pocket costs borne by patients for diagnosis and successful treatment average an estimated $100-$150, more than half the annual income of a daily wage labourer.[21] There has been an extensive debate on the need to protect the poor from user charges, because even small charges might have an undesired impact on their consumption of drugs and other health services. In the case of tuberculosis, which is very infectious, society has a great interest in controlling the disease and making sure that groups in society are not discouraged from seeking a cure. The cost of travel may also discourage patients from seeking treatment. For those who live in isolated regions, compared with patients who live in towns with convenient access to health centres, travel adds substantially to their cost of treatment.

Efficiency of tuberculosis control

To establish the cost-effectiveness of tuberculosis treatment, it is important to clarify one's measure of outcome. An intermediate measure such as compliance is not optimal, and a measure such as patients treated does not make sense in the case of tuberculosis unless the cure rate is established. The outcome measure should preferably be the number of persons cured. On the cost side, all costs – socio-economic costs as well as the cost of treatment – to providers and patients should be calculated. The preferred measure of cost-effectiveness is cost per patient cured, or marginal cost per patient cured if the programme is altered, for example by extending its life or by changing the mix of drugs.

The cost-effectiveness of tuberculosis treatment is relatively high: $3 $7 per DALY gained. Very few health-care interventions are so efficient. The main reason for such a high rate of cost-effectiveness is the fact that an infectious

19 See, for example, P. Kamolratankul and others, "Cost-effectiveness analysis of three short-course anti-tuberculosis programmes compared with a standard regimen in Thailand", *Journal of Clinical Epidemiology*, vol. 46, No. 7 (1993), pp. 631-636; and P. R. Saunderson, "An economic analysis of alternative designs for tuberculosis control in rural Uganda", *Soc Sci Med*, vol. 40, No. 9 (1995), pp. 1,203-1,212.

20 C. Murray and others, "Cost effectiveness of chemotherapy for pulmonary tuberculosis in three sub-Saharan African countries", *The Lancet*, No. 338 (1991), pp.1,305-1,308.

21 V. Pathania, J. Almeida and A. Kochi, "The behaviour and integration of TB patients and private for-profit health care providers in India: a review", unpublished paper (Geneva, RS/GTP/WHO, circa 1996).

person infects, on average, approximately 15 persons a year, each of whom infect another 15 persons a year, and so forth.

HIV-infected persons are a group at high risk for developing tuberculosis. WHO and IUATLD have issued therapy guidelines that recommend that HIV-infected persons who have not received BCG and have had a positive tuberculin test, but in whose case active tuberculosis has been excluded, should receive preventive chemotherapy (isoniazid) for 6-12 months. Since preventive chemotherapy increases life expectancy by approximately two to five years, the regime provides value for money and assures that the HIV-infected person does not die from tuberculosis. In contrast, a non-HIV-positive person who is treated for tuberculosis gains approximately 25-30 years of life from the treatment. In resource-poor countries, the use of chemotherapy cannot be justified if its use takes away resources from treatment of active cases of tuberculosis. In many countries at the present time, national tuberculosis programmes will not be able to follow this guideline.[22]

The resource constraint for health care in many developing countries forces Governments to choose between efficiency and equity. HIV-infected persons are already an extremely vulnerable group, and other (more expensive) drugs that can prolong life and increase their quality of life is available today only for HIV/AIDS patients in industrialized countries. If policy makers in developing countries — including multilateral and bilateral agencies — want to contribute to the welfare of HIV-infected persons, it is feasible for them to promote use of preventive chemotherapy as a secondary preventive tool. First, however, this must be made a priority either on equity grounds or because the community wants to protect itself from the spread of tuberculosis.

22 K. De Cock, A. Grant and J. H. D. Porter, "Preventive therapy for tuberculosis in HIV-infected persons: international recommendations, research, and practice", *The Lancet*, No. 345 (April 1995), pp. 833-836.

CONCLUSION: CONQUERING TUBERCULOSIS

Tuberculosis is today a major health problem that challenges the health services of many countries. As regards developing countries, tuberculosis is spreading rapidly in sub-Saharan Africa in the wake of the HIV epidemic as well as in Asia where it has been a substantial problem in itself for years. In economies in transition, tuberculosis is on the rise following the deterioration of public-health services that has accompanied the contraction of the economy. Globally, the world faces drug-resistant strains of tuberculosis for which there is no known cure or for which there exist only very expensive cures.

In Asia, China has made rapid progress in tuberculosis control during the last five years, but India, which has 30 per cent of all tuberculosis cases of the world, has still a long way to go. The projected increases in the number of HIV-infected persons in the next decade in this part of the world makes prospects for the immediate future bleak indeed. Some countries in Latin America have managed to cope well with tuberculosis control over the last few decades, but others in that region have been less successful. Sub-Saharan Africa has been hit severely by the HIV/AIDS epidemic; the lethal combination of a weak immune system and tuberculosis has become a fact of life for hundreds of thousands of people in that part of the world.

The saddest part of this tale is that the epidemic did not have to arise. The four-drug treatment for curing the disease at its source – in the person infected – has been available since the 1970s, and has been proved effective in a number

of countries. The world community could thus ask why it allowed this problem to reach epidemic proportions.

In countries affected by the epidemic, economic growth that improves the lot of the poor will help the situation. A decrease in the spread of HIV will also contribute positively to the fight against tuberculosis. Each of these events can occur, however, only in the medium term. In the meantime, Governments must recognize the magnitude of the problem and give it the priority it deserves. There are budgetary implications – this cannot be escaped – but they entail warranted expenditures that will be supported by an informed public. Part of what is involved is strengthening national systems by training health workers and by reorganizing and providing appropriate finance for their health systems.

Fundamental reforms are necessary if a tuberculosis control programme is to reach its targets. In China, this was achieved by providing diagnosis and treatment free of charge, by introducing incentive payments to the (private) village doctors for referral of patients and supervision of chemotherapy, and by inducing local Governments to fund the fixed costs of the dispensaries.[23] The example of China shows that it is feasible for Governments to work with private doctors, provided they set in place appropriate incentives. The lesson is not that a country cannot decentralize its health services, but rather that the central level must take on a supervisory and monitoring role in support of decentralization.

Successful tuberculosis control also requires that national and local Governments open health systems to all citizens and that medical doctors and other health workers become convinced of the need to ensure that the patients take their medication. In the final analysis, however, responsibility for success or failure rests on the shoulders of the patient. Further research is needed to determine why some patients fail to complete the treatment, even when the DOTS strategy is implemented, thus exposing themselves and others to drug-resistant tuberculosis.

The medical treatment recommended today has existed for many years, but the DOTS strategy was not developed by WHO until the 1990s. The concept of an entire set of prerequisites, including emphasis on a short-course (six-month) form of chemotherapy that has been proved cost-effective, is appealing. However, the DOTS strategy requires adequate and regular funding, which is not always forthcoming. China offers an excellent example of respect for existing institutions while building on them to reach new targets; but it must be emphasized that local Governments in China were ready and willing to cover the costs of diagnosis and treatment of tuberculosis patients. Countries that have less accessible health systems, or impose user charges on the poor, will find it difficult if not impossible to reach cure rates of 90 per cent or more.

Investment in health-care systems, such as a tuberculosis programme, requires years to produce noticeable results. Building infrastructure such as a hospital or a clinic is immediately visible to voters, even if, ultimately, the benefits to the community are less than those of a programme, to fight tuberculosis, which has a large outreach component.

Donor Governments generally prefer to target assistance on countries that are relatively small and relatively poor; but a survey carried out in 1990 showed that there is no clear relationship between external assistance to health sectors per capita and gross national product (GNP) per capita or between assistance per capita and measures of health needs. In particular, if burden of

23 T. Harrison, "Tuberculosis control in China: a case study of the infectious and endemic disease control project (tuberculosis component)", document WHO/TB/96.215 (Geneva, WHO, 1996).

disease or cost per DALY gained is taken account of by donors, this is not reflected in the allocation of resources to tuberculosis programmes.[24]

In other words, donors might review their priorities and consider whether the current allocation of funds is socially efficient. It is also important that the donors coordinate their actions, especially in the many developing countries undergoing structural adjustment programmes and facing increasing fiscal constraints on their health services.

The DOTS strategy underscores the role that political will plays in successful implementation of a tuberculosis control programme. To make the DOTS strategy a success, more attention also needs to be paid to the organization and finance of the health-care system within which the tuberculosis programme is going to operate. If this occurs, it will be possible to extend DOTS to those who are not served today and, in the longer run, to improve the DOTS strategy itself. The DOTS strategy must be combined with organization and financing in a given country to make it possible to reach targets for tuberculosis control.

The increasing importance of HIV infection and tuberculosis calls for research into the cost-effectiveness and sustainability of alternative methods of tuberculosis control in areas of high HIV prevalence. Such studies could cover preventive therapy for HIV patients with tuberculosis, as well as coordination of tuberculosis and HIV control activities, including home-based care and alternative methods of implementing DOTS.[25]

Tuberculosis control requires government intervention precisely because it creates huge externalities, that is to say, large benefits going to persons other than the patient. Governments can intervene in many ways. They can distribute drugs free of charge, or subsidize drugs for the poorest citizens. They can ensure that public clinics are within the reach of everyone, or provide incentives for private clinics to carry out this role.

In the case of tuberculosis, the only way to prevent the disease from spreading is to cure those who are already infected. The cure is available, the strategy to implement it has improved markedly in the 1990s, and it has proved to be cost-effective. This epidemic, along with the pain and suffering that it is causing, can be stopped if Governments choose to stop it.

24 C. Michaud and C. Murray, "External assistance to the health sector in developing countries: a detailed analysis, 1972-90", *Global Comparative Assesments in the Health Sector: Disease Burden, Expenditures and Intervention Packages*, C. Murray and A. D. Lopez, eds. (Geneva, WHO, 1994), pp. 157-169.

25 "Tuberculosis and HIV research: working towards solutions, results of a WHO workshop on the formulation of a new TB/HIV research strategy, Geneva, 29-31 May 1995", Global Tuberculosis Programme (GTB) document WHO/TB/95.193, 1995.

IX THE ECONOMICS OF THE ARMS TRADE AFTER THE COLD WAR

With the end of the cold war, there were widespread expectations of a "peace dividend" in the form of military resources being freed for economic and, particularly, social development. According to a broad interpretation of the term, there has been a wide-ranging dividend in the enhanced degree of peace and security in the world, with correspondingly wide-ranging indirect economic benefits, for example as a result of increased interaction between the former primary adversaries.

However, according to the narrower interpretation of the term which was usually applied, the allocation of the peace dividend has been difficult to identify. The evidence does not suggest that any significant proportion of the resources formerly used for military purposes were directly or implicitly reallocated to development or, specifically, to enhancement of social welfare. In many countries, those resources were largely used in the process of fiscal consolidation where the benefits were more diffuse and less directly observable than if there had been direct transfers of purchasing power.[1] In those cases where the discontinuation of military production and other activities resulted in unemployment, the consequence tended to be social costs rather than benefits. One response was to try to undertake "conversion" from military to civilian activities.[2] In view of the limitations on conversion, there was frequently domestic pressure to find external markets to substitute for the loss of domestic demand. With arms producers seeking markets for both their current production and existing stocks, the result was a "buyers' market" in the international arms trade.

Economic motivations, while always present, have therefore become more visible and have contributed to a new regional pattern in the international arms trade. They have also contributed to the emergence of new arrangements for the financing and international production of arms. At the same time, the first half of the 1990s saw a proliferation of low-level national conflicts, separate from superpower rivalry and mostly in countries that have limited capabilities to produce their own armaments. Trade in arms was necessary to sustain these conflicts and remains an important element of the overall threat to global peace and security. The present chapter reviews these developments in the international arms trade since the end of the cold war and examines the forces that are driving it now that the international political situation has changed.

1 See *World Economic and Social Survey, 1995* (United Nations publication, Sales No. E.95.II.C.1 and Corr. 1), chapter XIII entitled "Assesing the peace dividend resulting from the end of the cold war".

2 See *World Economic Survey, 1992.* (United Nations publication, Sales No. E.92.II.C.1 and Corr. 1 and 2), chapter VI entitled "Conversion and the peace dividend: prospects and emerging policy issues in the developed market economies".

RECENT DEVELOPMENTS IN THE INTERNATIONAL ARMS MARKET

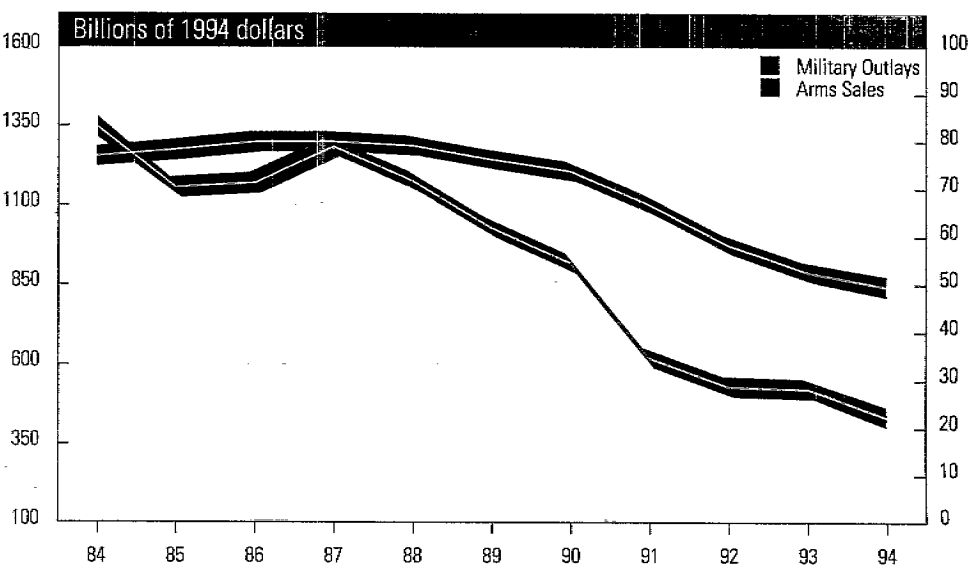
The value of the global arms trade peaked in the period 1984-1987, at an average annual value in 1994 dollars of $75.7 billion. The fall-off has been sharp, to an average annual value in 1991-1994 of $29.7 billion, also measured in 1994 dollars.[3] (See box IX.1 for a discussion of data sources and issues.) While the high levels of military procurement and international arms sales of the mid-1980s were probably not sustainable, the end of the cold war removed a major political motivation behind the supply of armaments and led to a much sharper decline in global sales than would otherwise have been the case. In addition, the post-cold war world has seen a reduced demand for military goods and services, as procurement budgets fell among members of the North Atlantic Treaty Organization (NATO) and the former Warsaw Treaty Organization (WTO), and in many other countries.

The decline in the value of international arms sales is coincident with, but far greater in relative terms than, the decline in worldwide military spending since the mid-1980s (figure IX.1). In the 1980s, the member countries of NATO and WTO dominated arms exports, and the decline in sales from those countries in the 1990s is the major factor behind the overall decline in international arms sales. The Union of Soviet Socialist Republics was a major supplier of arms prior to 1991, but its successor States play a much smaller role as exporters in the 1990s, to a significant extent because the other former WTO members have become far less important as arms importers. Many sales by the Soviet Union were subsidized, and newly privatized military production firms have encountered difficulty in competing in international arms markets. However, Russian firms have aggressively sought markets in recent years. The Russian Federation ranked first among countries in the value of arms transfer agreements entered into in 1995.[4] This may signal substantial growth in the

[3] United States Arms Control and Disarmament Agency (ACDA), *World Military Expenditures and Arms Transfers 1995* (Washington, D.C., United States Government Printing Office, 1996), table II.

[4] Richard F. Grimmett, *Conventional Arms Transfers to Developing Nations, 1988-1995*, United States Congress, Congressional Research Service, 15 August 1996.

Figure IX.1.
WORLDWIDE MILITARY EXPENDITURES AND INTERNATIONAL ARMS SALES



Source: United States Arms Control and Disarmament Agency, *World Military Expenditures and Arms Transfers 1995* (Washington, D.C., United States Government Printing Office, 1996), tables I and II.

Box IX.1. DATA SOURCES ON THE ARMS TRADE

Data on the value and volume of international trade in armaments are not available through the usual sources of information on global trade flows.[a] Only a few countries report such data on a consistent or complete basis.[b] Data on different aspects of the arms trade are collected and disseminated by two United States government agencies, by the United Nations and by the Stockholm International Peace Research Institute (SIPRI), a private non-governmental organization. These organizations utilize information from government agencies, published sources and, in some instances, classified or confidential material.

The United States Arms Control and Disarmament Agency (ACDA) issues an annual compendium of data on the value of arms transfer agreements, deliveries of armaments and military spending, broken down by country, region and organizational grouping (such as NATO or the Organization for Economic Cooperation and Development (OECD).[c] Because of ACDA's country coverage, the ACDA data are the most widely used. Those data are reported in dollars in both nominal and real terms, with the latter obtained by applying the United States implicit price deflator for gross domestic product. Since much of the international arms trade is transacted in dollars, there are relatively few issues regarding exchange-rate changes, although the use of market exchange rates can be controversial when currency convertibility is at issue. In the 1995 report, ACDA expanded its coverage of the export of military services.

The United States Congressional Research Service (CRS) issues an annual report on arms trade with developing countries.[d] As its title implies, the CRS report covers transfers to developing countries and does not offer as wide a country coverage as the ACDA report. Both ACDA and CRS publish data on arms transfer agreements that tend to precede actual sales and whose figures also tend to be higher than those of the sales, since some agreements are abrogated prior to completion. Neither ACDA nor CRS cite sources and it is presumed they have access to classified material.

SIPRI maintains a database on military spending and international arms sales which is included in its annual report on global military activities.[e] The SIPRI database focuses only on major weapon systems and uses only published sources. It is therefore less comprehensive in terms of weapons coverage than the two United States sources but is the only one of the three capable of being independently verified. SIPRI uses published prices or, where they are not available, prices obtained from the cost of comparable systems. SIPRI's aggregate values are lower than those of ACDA, but the trends have been similar.[f]

The United Nations Register of Conventional Arms publishes information supplied by Governments on the numbers of weapons actually transferred.[g] There are no data on the value of sales, and all data are obtained through voluntary compliance. The United Nations Register, therefore, is not comparable with the other sources but it does provide information that may allow other institutions to improve their data collection. In addition, since data are sought from both buyers and sellers for each transaction, there is a means of internal verification.

a Data issues are discussed in George Anayiotos and Nancy Happe, "Recent trends and the financing of the arms trade", International Monetary Fund (IMF) mimeo.

b According to one expert, "countries that disclose information about arms exports remain the exception and not the rule .... There are only two cases -- Sweden and the United States -- where governments are sufficiently forthcoming to permit detailed analysis of patterns of national exports using official data" (Ian Anthony, "Current trends and developments in the arms trade", *The Annals*, vol. 535 (September 1994), p. 31).

c United States Arms Control and Disarmament Agency, *World Military Expenditures and Arms Transfers 1995* (Washington, D. C., United States Government Printing Office, 1996).

d Richard F. Grimmett, *Conventional Arms Transfers to Developing Nations*, 1988-1995, United States Congress, Congressional Research Service, 15 August 1996.

e Ian Anthony, Pieter D. Wezeman and Siemon T. Wezeman, "The trade in major conventional weapons", in Stockholm International Peace Research Institute, *SIPRI Yearbook 1996: Armaments, Disarmament and International Security* (Oxford, United Kingdom, Oxford University Press, 1996), pp. 463-533.

f Ian Anthony, "Current trends and developments in the arms trade", *The Annals*, vol. 535 (September 1994), p. 35, feels that this is a coincidence, given the differences in methods.

g "General and complete disarmament: transparency in armaments: United Nations Register of Conventional Arms: report of the Secretary General" (A/51/300 and Add. 1-4), 20 August 1996; "General and complete disarmament: transparency in armaments: report on the continuing operation of the United Nations Register of Conventional Arms and its further development: report of the Secretary-General" (A/49/316), 22 September 1994.

Table IX.1.
ARMS EXPORTS AND IMPORTS BY COUNTRY, 1984-1987 AND 1991-1994

	Exports				Imports			
	1984-1987		1991-1994		1984-1987		1991-1994	
	Total (millions of 1994 dollars)	Percentage of world total	Total (millions of 1994 dollars)	Percentage of world total	Total (millions of 1994 dollars)	Percentage of world total	Total (millions of 1994 dollars)	Percentage of world total
World	75 745	100	29 373	100	75 745	100	29 373	100
NATO	36 360	48	22 858	78	9 316	12	6 383	22
United States	18 847	25	13 918	47	2 466	3	1 559	5
United Kingdom	4 071	5	4 485	15	987	1	356	1
France	6 756	9	1 284	4	274	0	175	1
Former WTO	31 970	42	4 135	14	6 995	9	460	2
Soviet Union[a]	26 555	35	3 699	13	1 781	2	0	0
Other[b]	7 415	10	2 380	8	59 434	78	22 530	77
China	2 053	3	1 097	4	787	1	526	2
Egypt	163	0	16	0	2 246	3	1 260	4
Israel	864	1	393	1	1 430	2	920	3
Japan	234	0	10	0	1 329	2	887	3
Republic of Korea	287	0	41	0	714	1	945	3
Saudi Arabia	30	0	4	0	9 310	12	7 261	25
Taiwan Province of China	10	0	11	0	980	1	914	3
Turkey	99	0	21	0	982	1	1 153	4

Source: United States Arms Control and Disarmament Agency, *World Military Expenditures and Arms Transfers, 1995* (Washington, D.C., United States Government Printing Office, 1996) table II.

[a] Data through 1991 referring to the former Soviet Union; starting with 1992, data referring to the Russian Federation.

[b] Largest importers in 1991-1994

value of Russian arms exports in the future. The United States of America is by far the largest exporting country, having accounted for almost half of arms exports in 1991-1994 (table IX.1).

The United States is the only country capable of exporting a full range of weaponry and equipment, and is considered to be a first-tier producer.[5] Other countries, including, for example, China, France, Germany, Italy, Japan, the Russian Federation, Sweden and the United Kingdom of Great Britain and Northern Ireland, have the technical capability but not at present the quantity or quality of production facilities to rival the United States in export markets. These countries produce a narrower range of weapons and equipment, and are considered second-tier producers. Third-tier countries produce a significant quantity of weapons but with less technical sophistication than first- or second-tier producers; and their production is often derived from designs originating with first- or second-tier producers. Such countries, including Australia,

5 Ian Anthony, "The 'third tier' countries: production of major weapons", in *Arms Industry Limited*, Herbert Wulf, ed. (Oxford, United Kingdom, Oxford University Press, 1993); Ian Anthony, "Current trends and developments in the arms trade", *The Annals*, vol. 535 (September 1994), pp. 29-42.

Brazil, Egypt, Israel, the Republic of Korea, Singapore and South Africa, have on occasion been able to sell in first- or second-tier country markets. More commonly, they sell to fourth-tier countries and other third-tier countries. In recent years, there has also been an increase in collaborative arrangements among third-tier countries. Fourth-tier countries produce unsophisticated weapons in minimal amounts and are not a factor on export markets.

Countries in the Middle East have been major arms importers since the 1970s, and continue to be so in the 1990s. Arms transfers to the Middle East grew following the 1991 Gulf war, in part to replace equipment and weapons used or destroyed during that conflict. In 1991-1994, Saudi Arabia was by far the world's largest importer of military goods and services. On the other hand, Iraq, a major weapons importer in the 1980s, was required to withdraw from the market in the 1990s as the result of United Nations enforced sanctions. The other region where arms imports have shown some growth is East Asia.[6] In both areas, regional security concerns have combined with substantial financial resources to provide a stimulus for arms purchases. East Asian countries in particular have utilized a portion of their growing incomes to become significant importers of arms and equipment.[7] A number of developing countries in this region have sought to use arms purchases, subcontracts and production-sharing arrangements as a means of obtaining technology and developing domestic industries that would eventually be capable of entering global aerospace markets as suppliers.

Purchases in Latin America and the Caribbean have been low, but as countries in that region recover from the 1980s debt crisis their capacity for increased arms imports will begin to rise. That both North Africa and sub-Saharan Africa have become far less important as arms importers is to a significant extent the result of the ongoing economic difficulties of most countries in those regions. In addition, the cessation of hostilities in Angola and Mozambique, and the establishment of a democratic post-apartheid Government in South Africa, have eliminated several sources of demand for armaments from Southern Africa.

6 Grimmett, op. cit

7 Desmond Ball, "Arms and affluence", *International Security*, vol. 18, No. 3 (winter 1993/94), pp. 78-112; Michael Klare, "The next great arms race", *Foreign Affairs*, vol. 72, No.3 (summer 1993), pp. 136-152.

Table IX.2.
WEAPONS DELIVERIES TO DEVELOPING COUNTRIES BY MAJOR SUPPLIERS, 1986-1989 AND 1992-1995[a]

Number of weapons

Weapons category	1986-1989	1992-1995
Tanks and self-propelled guns	4 396	2 485
Artillery	9 630	4 941
Armoured vehicles	7 327	3 891
Supersonic combat aircraft	944	335
Subsonic combat aircraft	195	133
Other aircraft	480	142
Helicopters	1 012	513
Surface-to-air missiles	13 396	5 463
Surface combat vessels	187	105
Submarines	18	12

Sources: Richard F. Grimmett, *Trends in Conventional Arms Transfers to the Third World by Major Supplier*, 1982-1989 (Washington, D.C., Congressional Research Service, 19 June 1990), table 3; Richard F. Grimmett, *Conventional Arms Transfers to Developing Nations*, 1988-1995 (Washington, D.C., Congressional Research Service, 15 August 1996)

[a] Major suppliers including France, Federal Republic of Germany, (1986-1989), Germany (1992-1995), Italy, Russian Federation (1992-1995), Soviet Union (1986-1989), United Kingdom and United States.

tries and countries that were members of neither alliance.[10] Disagreements remain over which products to restrict, and conflicts with manufacturers are likely as the latter pursue export markets. Individual countries continue their policies on export limitations but with mixed success.[11]

The rising importance of dual-use goods reflects the growing sophistication, and in many cases the declining real costs, of civilian goods and technology. In the years after the Second World War, many war-related technological developments were "spun-off" into goods for civilian markets. For example, research on computers and applications of computer technology received substantial support from military research and development and military purchases in the United States and the United Kingdom.[12] Jet aircraft and radar also emerged from Second World War military programmes. Production engineers at Toyota credited United States aircraft production systems in the Second World War with providing a model for the just-in-time inventory system that became an essential element of Japan's lean production systems.[13]

Now, in many countries, "spin-on" has become important.[14] High development costs, long lead times and relatively small markets for military goods and services, combined with demands from military end-users for constant technical improvements, have contributed to rapid unit-cost growth for many military products. Thus, the growing technical sophistication and declining costs of many civilian products and processes have made them more attractive for use in military products. Some analysts have explicitly argued that Governments should foster the development of dual-use technologies and products in order to cross-fertilize both military and civilian industries.[15] In Japan, the Government has long fostered dual-use strategies on the part of firms.[16] The leading Japanese military production firms are also leaders in civilian manufacturing and high-technology industries and have engaged in extensive cross-fertilization between civilian and military activities. France has also supported both civilian and military applications of technology but in different firms. Present moves by France towards privatization and rationalization in military production may increase the overlap between military and civilian producers. In the United States, spin-off from military to civilian industries was important after the Second World War, but military production and civilian production have become increasingly separate since that time.

Trade "offsets"

Trade "offsets" occur when the supplying company agrees, as a condition of a weapon sale, to purchase goods and services in the importing country. Offsets can also include a commitment to subcontract part of the weapon system production in the importing country. Increasingly, they include purchases of goods and services not connected with the weapon or equipment being sold, and even purchases of purely civilian goods and services. These arrangements are forms of "counter-trade", a practice that is intended to offset all or part of the foreign exchange cost of imports with equivalent foreign exchange earnings. Such arrangements have traditionally been sought when the importing country either has limited access to foreign credit (for example, as the result of a foreign debt overhang) or puts a premium on increasing exports (for example, when exporters are facing difficulties of their own).

10 United States Arms Control and Disarmament Agency, "The Wassenaar Arrangement on export controls for conventional and dual use goods and technologies", December 1996.

11 Michael R. Gordon, "Russia buys IBM supercomputer despite U.S. export controls", *New York Times*, 25 February 1997.

12 Kenneth Flamm, *Creating the Computer: Government, Industry and Technology* (Washington, D.C., The Brookings Institution, 1988).

13 Michael A. Cusumano, *The Japanese Automobile Industry: Technology and Management at Nissan and Toyota* (Cambridge, Massachusetts, Harvard University Press, 1985), pp. 277-278.

14 Jay Stowsky, "From spin-off to spin-on: redefining the military's role in American technology development", in Wayne Sandholz and others, *The Highest Stakes: The Economic Foundations of the Next Security System* (New York, Oxford University Press, 1992).

15 Jacques Gansler, *Defense Conversion: Transforming the Arsenal of Democracy* (Cambridge, Massachusetts, The MIT Press, 1995).

16 Masako Ikegami-Anderson, "Japan: a latent but large supplier of dual-use technology", in *Arms Industry Limited*, Herbert Wulf, ed. (Oxford, United Kingdom, Oxford University Press, 1993); Steven Vogel, "The power behind 'spin-ons': the military implications of Japan's commercial technology", in Wayne Sandholtz and others, *The Highest Stakes: The Economic Foundations of the Next Security System* (New York, Oxford University Press, 1992).

The changing global political balance has also been reflected in changes in the types of weapons being traded. Larger weapons systems, including, for example, combat aircraft, fighting ships and tanks, are being traded in far lower numbers (table IX.2). There has been some shift towards the upgrading of older systems involving purchases of components and technological know-how. Such sales, however, can be difficult to track. There has also been some growth in sales of lower-intensity armaments, often those more suited for domestic conflicts and police activities.[8] In addition, non-State actors such as insurgency movements and paramilitary organizations have become relatively more important as buyers, although it is extremely difficult to obtain accurate and timely information on such activities. Partly as a result of the growth of non-State buyers, black markets in weapons appear to have grown in importance.[9]

THE EVOLVING ARMS MARKET

Two decades ago, the international arms trade could largely be characterized as involving government-to-government arrangements for the transfer of weapons and equipment in return for cash payments, sometimes financed by aid or low-interest credits advanced by the supplying Government. Producing companies would work with Governments in arranging sales and deliveries. Over time, however, a variety of arrangements have developed that have increased the complexity of the arms trade and generated additional channels for the transfer of both weapons and military technology.

Dual-use products

The existence of products and industrial processes that have both civilian and military applications, either directly or with accessible modifications, presents a difficult problem in regard to both the analysis of arms transfers and the formulation of policies and norms for the control of military transfers. Examples of dual-use goods and services are vehicles, including aircraft and ships, that can serve as troop and supply carriers, radar systems, computers and machine tools. Some avionics systems can be used on both military and civilian aircraft. Another area of concern is the possible overlap between civilian research in nuclear energy and in chemical and biological processes, and the development of instruments of nuclear, chemical and biological warfare.

The trade in dual-use products leads to an undercounting of the value of arms exports. The classification of an export as military is determined by the nature of the buying entity. If a dual-use product is purchased by a civilian agency and later transferred to a military organization, it will likely be counted as a civilian export. Similarly, computer chips purchased by a manufacturer of civilian goods and then used in the manufacture of military equipment would not be considered a military export.

During the cold war, the NATO countries attempted to control the export of dual-use goods to WTO members. This led to a number of controversies as civilian technologies became more sophisticated and civilian goods, such as personal computers and machine tools, were denied export licences to WTO member countries. Recent attempts to establish a wider export control regime for militarily sensitive dual-use goods have included NATO countries, former WTO coun-

8 Jeffrey Boutwell, Michael T. Klare and Laura W. Reed, eds., *Lethal Commerce: The Global Trade in Small Arms and Light Weapons* (Cambridge, Massachusetts, American Academy of Arts and Sciences, 1995).

9 Michael Klare, "The arms trade in the 1990s: changing patterns, rising dangers", *Third World Quarterly*, vol. 17, No.5 (1996), pp. 857-874; Aaron Karp, "The rise of black and gray markets", *The Annals*, vol. 535 (September 1994), pp. 175-189.

The growth of offsets was originally a reflection of competition among sellers. Military industries are traditionally characterized by excess capacity. Military production firms have high fixed costs, especially in research and development. However, limited procurement budgets make it difficult for firms to generate enough domestic sales to spread their fixed costs in a manner that would allow prices to fall. This provides a powerful incentive for firms to seek export markets and has been a stimulant to government policies promoting military exports. A number of Governments have aggressively sought export markets for their military output, both to generate revenue and to reduce the unit costs of their own weaponry.[17]

In addition, new technological developments often do not replace existing capacity, but lead to the creation of new capacity as domestic political pressures constrain the ability of Governments to shut down production lines.[18] This may be changing as the decline in the size of the market is forcing some consolidation, although substantial excess capacity remains. In the 1990s, the enhanced power of buyers in a shrinking market, as well as (when subcontracting is involved) the growing production capabilities in many buying countries, has further stimulated the granting of offsets.

To meet their offset commitments, arms sellers have acted as brokers and involved other companies in purchasing in the importing country. In such instances, the value of offsets has on occasion exceeded 100 per cent of the value of the arms sale.[19] Offsets make it more difficult to justify an arms sale on the basis of the economic stimulation that it provides to the exporting country's arms industries and, via multiplier effects, to local and regional economies.[20] On the other hand, offset agreements are not always easy to enforce. In certifying offsets, it is not always clear whether a particular purchase is new or if it constitutes a diversion or reclassification of one that would have occurred in any event. For this reason and others, offset commitments are often not fully met or enforced.

Co-production arrangements

Offset agreements often include subcontracting and co-production arrangements. In recent years, a wide variety of international collaboration agreements have become more common, and represent an important aspect of the growing internationalization of military production (see figure IX.2).[21] Subcontracting and licensing have been important in the past, with both the United States and the former Soviet Union being major participants. In the 1990s, licensees were largely third-tier developing-country producers. Co-production arrangements involve firms from more than one country producing a weapon originally produced in one country. During the cold war years, co-production arrangements had strong political overtones, as countries used co-production as a means of ensuring weapons commonality and sharing economic benefits among allies.

Co-development, an extension of co-production, involves pooling development resources and activities on a new project. Various long-term collaborative relationships are also being used including joint ventures and other risk-sharing arrangements. The large development costs, small markets and long production runs characteristic of weapons production induce companies to seek collaborators in order to pool risks. The growth of collaborative arrangements among mili-

17 United States Congress, Office of Technology Assessment, *Global Arms Trade* (OTA-ISC-460) (Washington, D.C., United States Government Printing Office, June 1991); William W. Keller, *Arm in Arm: The Political Economy of the Global Arms Trade* (New York, Basic Books, 1995).

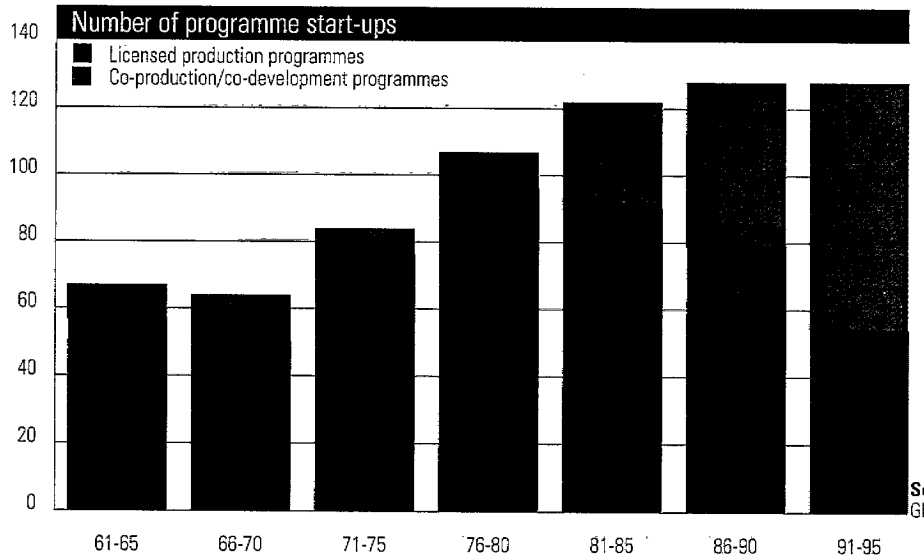
18 Ann Markusen and others, *The Rise of the Gunbelt: The Military Remapping of Industrial America* (New York, Oxford University Press, 1991) describe this process for the United States.

19 Stephanie G. Neuman, "Coproduction, barter and countertrade: offsets in the international arms market", *Orbis*, vol 29, No. 1 (spring 1985), pp. 183-213; United States General Accounting Office, *Military Exports: Offset Demands Continue to Grow* (GAO/NSIAD 96-65) (Washington, D.C., United States General Ac Office, 1996).

20 William D. Hartung, *Welfare for Weapons Dealers: The Hidden Costs of the Arms Trade* (New York, World Policy Institute of the New School for Social Research, 1996).

21 David Gold, "The internationalization of military production", *Peace Economics, Peace Science and Public Policy*, vol. 1, No. 3 (1994), pp. 1-11; Richard A. Bitzinger, "Globalization in the post-Cold War defense industry: challenges and opportunities", paper prepared for the Council on Foreign Relations Study Group on Defense Industry Globalization, Conversion and the Arms Trade, November 1996.

FIGURE IX.2.
INTERNATIONAL ARMS COOPERATION AGREEMENTS, 1961-1995



Source: Richard A. Bitzinger, Defense Budget Project Globalization Database.

tary firms largely follows the expansion of similar arrangements among civilian producers in such areas as electronics and airframe and engine manufacturing. [22]

Government policies play a large role in shaping collaborative agreements among military producers. In a number of instances, Governments have negotiated collaborative agreements with leading arms producers as a means of obtaining access to advanced product technologies and production know-how for the purpose of stimulating their own industrial development. In Japan, collaborative arrangements with both military and civilian aircraft manufacturers from the United States are part of this strategy, which is consistent with Japan's emphasis on developing dual-use technologies. Japanese firms are major subcontractors to Boeing on civilian airliners and are co-producing, with McDonnel Douglas, the F-15 for the Japanese Air Force. In addition, Japan is developing a new fighter aircraft, originally known as the FSX and now called the F-2, in a major technology-sharing agreement with the United States.[23]

Asian developing countries have also looked towards international collaboration as a means of stimulating domestic military industries. The Republic of Korea, for example, is co-producing the United States-developed F-16 fighter aircraft, and hopes to use the knowledge gained to create a domestic aircraft industry.[24] China has developed several weapon systems based on designs obtained from the former Soviet Union.[25]

These efforts have met with mixed success. Japanese firms have become internationally recognized producers of some military components, and are playing important and growing roles as subcontractors in civilian airliner construction. However, despite a decades-long effort to develop a domestic aircraft industry and with numerous achievements in other high-technology activities, Japanese firms are still not able to compete internationally in either civilian or military aircraft production.[26] This is partly due to the difficulties involved in catching up in an industry where technological standards are rapidly advancing.

22 David Mowery, ed., *International Collaborative Ventures in U.S. Manufacturing* (Cambridge, Massachusetts, Ballinger Publishing Company, 1988); Elisabeth Sköns, "Western Europe: internationalization of the arms industry", in *Arms Industry Limited*, Herbert Wulf, ed. (Oxford, United Kingdom, Oxford University Press, 1993).

23 Michael J. Green, *Arming Japan: Defense Production, Alliance Politics and the Postwar Search for Autonomy* (New York, Columbia University Press, 1995). The United States has apparently not received all of the technology that it hoped to acquire in the FSX/F-2 project (see United States General Accounting Office, *U.S.-Japan Fighter Aircraft: Agreement on F-2 Production* (GAO/NSIAD-97-76) (Washington, D.C., United States General Accounting Office, February 1997).

24 Michael Micham, "South Korean manufacturers make F-16 their star", *Aviation Week & Space Technology*, 14 October 1996.

25 Bates Gill and Taeho Kim, *China's Arms Acquisition From Abroad: A Quest for "Superb and Secret Weapons"*, Stockholm International Peace Research Institute (SIPRI) Research Report, No. 11 (Oxford, United Kingdom, Oxford University Press, 1995.

26 Green, op. cit., pp. 154-156; Michiyo Nakamoto, "Japan abandons hope of flying solo", *Financial Times*, 10 January 1997.

The ability to integrate a wide range of rapidly changing technologies into a single product is difficult to achieve, and helps explain why these product lines tend to be dominated by a small number of firms.[27] Nonetheless, the growth of offsets and collaborative arrangements offers evidence of important changes in the arms market. The fact that arms sales are increasingly accompanied by transfers of technology tends to result in a spreading of the ability to produce weapons among a larger number of countries. This has led to a paradoxical situation where the substantial decline in global arms sales has been accompanied by a proliferation of the ability to produce weapons and equipment.

27 Gansler, op. cit.

THE FUTURE OF THE ARMS TRADE

The international arms trade is unlikely to reach cold war levels in the foreseeable future, but there are indications that it might expand in coming years. The largest uncertainty involves political relations and national perceptions of security needs. Flare-ups in conflict situations and deteriorations and setbacks in situations where tensions have been reduced would likely stimulate an increase in arms transfers. Regional arms races are also possible, for example where domestic resource availability allows some countries to make significant arms purchases and where countries feel that their security is threatened.

With respect to the major weapons-producing and -supplying countries, there is likely to be an increase in the development of new systems to replace the present range of weaponry based on older technology. In the United States, for example, three combat aircraft are in development as potential replacements for 1970s-era systems. In addition, a heightened emphasis on information-based offensive and defensive systems is stimulating the development of technologies to upgrade existing systems and generate new ones.[28] New weapons development can intensify pressures to export as firms and Governments seek to spread development costs. Indeed, export potential is usually included in the projecting of programme output and unit costs. This involves identifying potential buyers, assessing their needs and providing them with information on system specifications during research and development. Even as new systems are brought into production, older production facilities are sometimes kept open for the purpose of generating output for export.

28 W. Seth Carus, "Military technology and the arms trade: changes and their impact", *The Annals*, vol. 535 (September 1994), pp. 163-174.

In some countries, the downturn in military spending has stimulated some rationalization in military production. For example, in the United States, a boom in mergers and acquisitions has reduced the number of major weapons producers and led to the closing of some capacity, although substantial overcapacity remains.[29] It is not clear, however, whether a more concentrated industry will be more successful in containing development costs. A needed consolidation among defence producers in Western Europe has yet to occur, although some Governments have taken steps in that direction.[30] Russian military production firms are beginning to emerge from that country's restructuring, and in the absence of strong growth in domestic civilian and military markets these firms are likely to be aggressive exporters.[31]

29 Jeff Cole, "Defense consolidation rushes toward an era of only 3 or 4 giants", *Wall Street Journal*, 6 December 1996; "Lockheed to close 8 plants", *New York Times*, 19 November 1996; Anthony L. Velocci, Jr., "U.S. industry poised for further realignment", *Aviation Week & Space Technology*, 23/30 December 1996.

30 Michael Brzoska, Peter Wilke and Herbert Wulf, "The changing civil military production mix in Western Europe's defense industry", paper prepared for Council on Foreign Relations Study Group on Defense Industry Globalization, Conversion and the Arms Trade, October 1996.

31 Clifford G. Gaddy, *The Price of the Past: Russia's Struggle with the Legacy of a Militarized Economy* (Washington, D.C., The Brookings Institution, 1996), pp. 174-175; International Institute for Strategic Studies, *The Military Balance* 1996/97 (London, Oxford University Press for the International Institute for Strategic Studies, 1996), pp. 275-276.

The existence of significant conversion potential would reduce the pressures to increase exports. While Governments may be capable of taking more effective measures to reduce capacity and control costs, the lack of success in converting to civilian production leaves many military firms with little choice

but to seek export markets or substantially reduce their scale of operations.

Conversely, growing numbers of firms in developing countries are acquiring the capability to compete in world military markets, especially in electronics, communications and sub-component manufacturing. The emerging emphasis on information systems will expand the demand for the upgrading and retrofitting of existing weapons platforms, and such firms are poised to gain a significant share of that business. In these situations, the transfer of technology and business skills from civilian activities is making the firms concerned more effective competitors in certain military markets.

The decline in the volume of international trade in arms has been partially offset by a broadening of the market, in terms of both the range of products involved and the number of countries participating as either importers or exporters. The transfer of technology, either directly or through trade in dual-use goods, has reinforced the proliferation of arms-making capabilities. This increased globalization of trade in sophisticated, if not the most advanced, weaponry increases the possibility that armed conflict will arise in politically tense situations. While significantly reduced in magnitude, the present pattern of the international arms trade nevertheless poses a continuing threat to world peace and security.

X INTERNATIONAL TRAVEL: A VITAL DIMENSION OF GLOBAL INTEGRATION

A prominent theme in writings about international economic relations over the past decade has been the increased integration of the world economy. Some analysts have highlighted the closer linking of the world's financial markets, the trillion-dollar-a-day foreign exchange market and the greater ability of some "emerging market" economies to tap the vast pool of foreign financing. Others have focused on the greater role that traded goods and services play in economies as barriers to trade fall and as transnational corporations diversify their production locations and markets. The present chapter outlines developments in another sector of international trade, namely international travel. It is a sector that has grown rapidly, pushed by rising discretionary incomes, falling real costs and more rapid communication and transportation, and one that is of considerable economic importance to some countries.

International travel is a unique category of international trade. Instead of the exchange of a good between residents of two countries, international travel requires the physical presence of a resident of one country in a second country. Travellers arrive in the foreign country for any of several reasons. Their stay is temporary, however, and generally short. The goods and services they consume while in the host country make up, in essence, the category of trade designated "travel" for statistical purposes (see box X.1). This chapter looks at developments in international travel as portrayed by these recorded data. However the value of travel itself — tourist travel in particular — seems to be far in excess of these recorded expenditures, especially if account is taken of the greater appreciation of foreign peoples and cultures that it engenders.

TRENDS IN INTERNATIONAL TRAVEL

During the past quarter century, international travel receipts grew by an average of 12.5 per cent per annum in current dollars (see table X.1[1]), significantly faster than the corresponding figure of 9.7 per cent for world output. In many countries, the travel industry is increasingly recognized as a strategic sector for earning foreign exchange, diversifying the export base, generating employment and reducing regional imbalances.

In 1996, international travel receipts reached $389.4 billion,[2] of which the developed economies accounted for about three quarters and the developing economies for most of the remaining amount (table X.1). This exceeded the

1 Here "world" consists of the 110 countries for which there is a full set of data on international travel for the period 1970-1995 in various editions of the IMF *Balance of Payments Statistics Yearbook*.

2 According to the World Tourism Organization, which has a wider coverage of developing and transition economies, the figure was $423 billion in 1996.

estimated value of total world oil exports ($330 billion[3]) in the same year. The world tourism industry is estimated to have generated a total revenue of $3.6 trillion, equivalent to 10.7 per cent of world output, and employed 255 million people worldwide in 1996.[4]

Except for slight setbacks in the early 1980s and in 1993, world travel receipts sustained uninterrupted growth during the period 1970-1995. Both the developed and the developing economies exhibited broadly similar trends in international travel receipts during this period (see figure X.1), though the average rate of growth in the developing economies was about 1.5 percentage points higher than in the developed economies.[5] After a mild dip in the early 1980s, the travel receipts of the developed economies grew rapidly in the second half of the 1980s in response to the prolonged expansion of world economy and a sharp fall in real air fares. In the first half of the 1990s, however, the growth rates for the developed economies decelerated significantly and exhibited large annual fluctuations. This slowdown was more pronounced than in the developing economies, reflecting not only the cyclical downturn and the effects of the Gulf war in 1991 but also the workings of so-called ceiling effects (such as the limit to paid annual leave entitlements) and the shift of tourists to more competitive destinations in developing and transition economies.

Travel receipts in transition economies in Eastern Europe exhibited large fluctuations and divergent trends, partially reflecting political uncertainties. Since the beginning of this decade, travel receipts in a number of transition economies, in contrast with the developed and the developing economies, exhibited a strong upturn. According to the statistics of the World Tourism Organization,[6] overall travel receipts in Central and Eastern Europe grew 31 per cent per annum during the period 1990-1994. As restrictions on border crossings are reduced, tourists from developed economies are increasingly lured by many attractions in these countries which are largely new to them. These countries have competitive advantages in low prices, proximity to European developed economies, historical heritages, and ethnic ties with many developed economies. They are emerging as major competitive destinations by developing these niche markets.

Among developed economies, travel receipts in Australia and New Zealand grew most rapidly, with an average annual growth of 16.8 per cent and 17.9 per cent, respectively, during the period 1970-1995. They benefited most from a dramatic surge in tourist outflows from Japan and booming Asian economies. By 1995, their travel receipts exceeded 10 per cent of their merchandise exports. In the case of Australia, travel exports exceeded its largest commodity export

3 Estimate based on various issues of OPEC *Annual Statistical Bulletin*.

4 See World Travel and Tourism Council (WTTC), *The 1996/7 WTTC Travel & Tourism Report* (London, 1996). This figure for employment in travel/tourism includes jobs not only in traditional travel service industries, such as airlines, hotels and restaurants, but also in government travel services, construction of tourism facilities and manufacturing of goods consumed by tourists.

5 In terms of tourist arrivals, the growth pace in the developing economies was significantly more rapid than that in the developed economies, 5.9 per cent per annum as against 3.9 per cent per annum during the period 1980-1994.

6 These statistics cover a greater number of transition economies than the IMF data.

Box X.1.

INTERNATIONAL TRAVEL: DEFINITIONAL AND MEASUREMENT ISSUES

An empirical examination of international travel is subject to the availability, the quality and the comparability of the data. Shortcomings in concepts and data methodologies, differences among original national sources and other problems stemming from the peculiar nature of international travel itself can introduce inconsistencies in data interpretation.

In this chapter, the data are derived from two major sources: the International Monetary Fund (IMF) *Balance of Payments Statistics Yearbook* for international travel receipts and expenditures and the World Tourism Organization (WTO) *Yearbook of Tourism Statistics* for international tourist arrivals. The IMF definition and data are used predominantly because

they cover more countries in terms of expenditure value. IMF defines international travellers as individuals who stay for less than one year in a country where they are not residents. Travel expenditure covers all goods and services personally used by travellers during their stay in a foreign country. It excludes international transport expenditure. Travel is divided into two categories: business and personal.[a] Personal travel includes holidays, recreational and cultural activities, visits to relatives and friends, pilgrimages and religious observances, and education and health-related travel.

This IMF concept is broadly equivalent to the concept of an international visitor in the WTO recommendation except for the following:

a WTO excludes seasonal[b] and border workers;

b WTO excludes students and medical patients going abroad for more than one year;

c WTO includes the transport expenditures paid to resident carriers by non-resident visitors and to non-resident carriers by resident visitors. This inconsistency has been addressed by separating passenger transportation from international tourism receipts in the WTO statistics.

Even when the international definitions are used, the comparability, the accuracy and the completeness of data depend on the specific methodologies used in data collection. In collecting value data, three methods are used. The most common one is based on bank reports on foreign currency transactions (classified by purpose). Some transactions, however, are not captured in the bank reports and not all the reported transactions are necessarily for travel spending in the reporting country. Data from this method are much less reliable where there is no effective system of foreign exchange control. A second method involves sample surveys of travellers at border crossings and is used by a few countries. This method gives more detailed and reliable data but is costly. The third method is a combination of the first two. Very few countries use this method.

Methods used in collecting data on international tourist arrivals also vary widely across countries. Statistics are collected through border immigration controls, detailed periodic surveys or registration at place of accommodation. Most countries collect data on tourist arrivals at the frontier. As regional integration progresses (as in the case of the European Union), the data becomes increasingly unreliable and survey methods are expected to be more widely used. Data from accommodation registration involve a degree of uncertainty due to under-reporting. In addition, there are inaccuracies as a result of visitors' moving among accommodations in the same country and unreported visitors' staying in non-commercial accommodations.

The coverage can also differ among countries because of the wide range of goods and services that travellers consume. Changes in exchange rates can affect the value data because they are reported in United States dollars. In some developing and transition economies where there are foreign exchange controls, expenditures tend to be under-reported. The existence of an underground tourist economy and multi-country package tours are also sources of data uncertainty.

Thus, even though the same definition is used, there can be varying degrees of discrepancy among reported data by individual countries and the data may not be comparable in a strict sense. Sizeable bilateral discrepancies are not uncommon. Sometimes the bilateral discrepancy can be as large as 50 per cent.[c] However, the global inconsistency between credits and debits in international travel is much smaller than in other components of the invisible trade account. The global discrepancy for travel was $23.6 billion in 1995, equivalent to 6.1 per cent of world total travel receipts. This compares with 24 per cent and 10.5 per cent for transportation and income, respectively, both of which are major components of the invisible trade account.[d]

Despite reservations about concepts and data methodology, the published figures appear to indicate broad trends and can be used to analyse changing patterns over time, since the methodology has not changed.

[a] This grouping was devised to be consistent with the treatment of national income accounts in the System of National Accounts where business travel is included in the intermediate consumption of producers while personal travel is included in final consumption of households.

[b] Their personal expenditures, however, are included in travel.

[c] See D. Choi and V. Singh, "Preliminary results of the development of service trade matrices", paper presented at the spring 1996 Project LINK meeting. Department for Economic and Social Information and Policy Analysis of the United Nations Secretariat, mimeo.

[d] See IMF, *Report on the World Current Account Discrepancy* (Washington, D.C., IMF, September 1987).

Table X.1.
INTERNATIONAL TRAVEL RECEIPTS BY REGION, 1970-1996

(Billions of dollars)

	1970	1980	1990	1994	1995	1996
World	19.2	94.9	247.4	321.2	361.9	389.4[a]
Developed economies	15.0	72.8	192.8	237.4	264.2	..
Developing economies of which:	4.0	21.5	54.1	83.2	96.9	..
Latin America	1.4	6.7	12.9	17.1	17.6	..
Africa	1.3	4.1	7.0	8.9	10.4	..
Western Asia	0.3	2.2	6.5	9.7	11.1	..
China	0.04	0.62	2.2	7.3	8.7	..
Eastern and Southern Asia	0.9	7.8	25.4	40.3	49.1	..
Economies in transition	0.2	0.56	0.46	0.56	0.84	..

Source: United Nations, based on data of IMF and WTO (sample of 110 countries).
[a] Estimate based on WTO data.

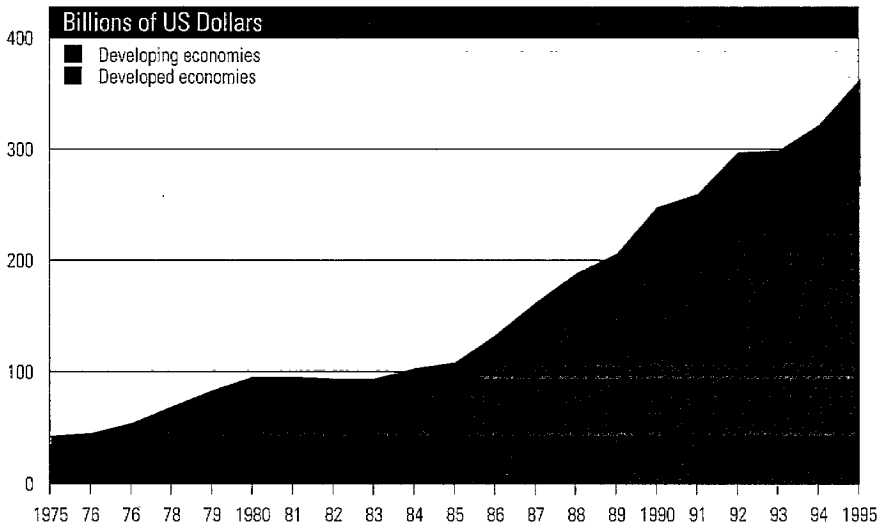
items, metal ore and wool, in 1995. The United States of America, Iceland and Malta also exhibited markedly higher growth in travel receipts than the average developed economies during this period, while Canada and most other developed economies with strong currencies experienced below-average growth.

Most of the growth in the travel receipts of the developing economies came from China, Eastern and Southern Asia, and Western Asia. There were large variations in performance among individual developing countries, with growth ranging from 1 per cent per annum in Gabon to 31.4 per cent per annum in Indonesia between 1970 and 1995. In general, three groups of developing economies tended to exhibit high growth: countries that had good natural tourism resources and pursued active tourism policies; countries that had gone through rapid industrialization and liberalized their economies; and countries that had generated large flows of migrant workers and emigrants in the recent past.

Some dynamic economies in Asia recorded 20-30 per cent growth per annum in travel receipts in the second half of the 1980s. Travel within the region was stimulated by rapidly growing income, freer intraregional travel, increased leisure time and dynamic trade and investment. The availability of low-cost group tours and government promotion measures (such as encouraging investment in tourism and the launching of "visit years") were also important factors. In the case of China, travel receipts increased more than 10-fold during the period 1980-1995. It became the second largest earner (after Hong Kong) among developing economies in 1995. The combined earnings of these two economies was $18.3 billion, about the same as the earnings of the United Kingdom of Great Britain and Northern Ireland.

Travel receipts in many developing economies, except for a number of the well-established favourite locations, are small relative to their potential, with many of the possibilities offered by natural beauty and rich heritage left untapped. Development of tourism in these economies has been constrained by inadequate accommodations and poor transportation.

Figure X.1.
WORLD TRAVEL RECEIPTS, 1975-1995



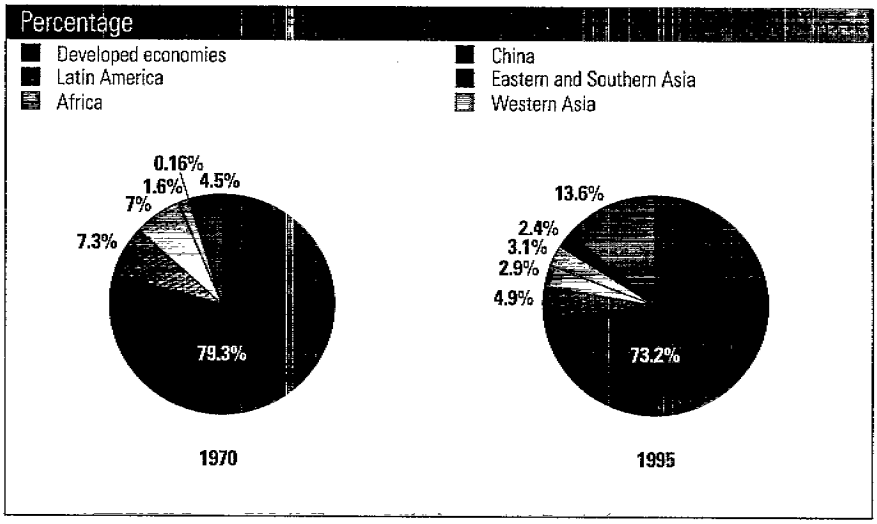
Source: United Nations, based on data of IMF and WTO (sample of 110 countries).

In a number of transition economies, such as the Russian Federation, the Czech Republic and Slovakia, growth in travel receipts, albeit from a low base, was particularly spectacular at 35-50 per cent per annum in the first half of this decade. Others, particularly those where some political uncertainty prevailed, such as Bulgaria and Romania, exhibited large fluctuations. By 1994, the Czech Republic, Hungary, Poland and the Russian Federation were among the 50 largest earners in the world. In 1980, none of these countries had been on this list. The combined receipts of these four countries was $10.7 billion in 1994, less than the $13.1 billion of Austria, while the number of tourist arrivals in Hungary alone was 21.4 million, larger than the 17.9 million in Austria.Virtually all of these countries suffer from inadequate accommodation and infrastructure as a result of decades of low investment in tourist facilities. This is one of the factors that explains their low average receipts per tourist. In 1994, this figure was $66.7 for Hungary, compared with $735.4 for Austria. Joint ventures with large foreign chains are increasingly perceived as a major instrument for eliminating bottlenecks in good-quality accommodations and services, but the adoption of the necessary regulatory environment has been slow. In some countries, however, private participation in tourism industries has progressed to a significant extent.

Reflecting their slower growth than the world average, the developed economies' global share of travel receipts has declined 6 percentage points during the last 25 years, while that of the developing economies has risen by a comparable amount[7] (see figure X.2). Thirteen out of the 20 top tourism "exporters" in the world were developed economies in 1994 (see table X.2). The United States was the largest, earning $69.8 billion in 1995. Its global share almost doubled from 12 per cent in 1970 to 19.3 per cent in 1995 owing mainly to the incentive provided by the depreciation of the dollar against other major currencies. Its share was more than twice that of the next largest tourism

7 The developed economies' global share of international tourist arrivals has been much smaller than their global value share and declined from 59.6 per cent in 1980 to 50.1 per cent in 1994, reflecting the difference in spending per arrival.

Figure X.2.
WORLD TRAVEL RECEIPTS BY GROUPS OF COUNTRIES, 1970 AND 1995



Source: United Nations, based on data of IMF and WTO (sample of 110 countries).

exporter, France. The majority of other developed economies, particularly Austria, Denmark, Finland, Germany, Ireland, the Netherlands and Switzerland, lost global shares. The higher relative cost in these countries caused travellers to shift to more competitive destinations.

About three quarters of the international tourists in the developed economies in 1994 were from within that group of countries. Except for Japan, where inflows from the developed economies accounted for only about 35 per cent of total arrivals, developed regions received more than 60 per cent of their tourists from developed economies. Within Western Europe, more than three quarters of tourists were received from within the region, with the share ranging from 66 per cent in the United Kingdom to 97 per cent in Portugal in 1994. Tourist arrivals were relatively more concentrated in countries along the Mediterranean coast, reflecting the flows of sunlust travellers from Northern European countries. The share of arrivals in Europe from the United States fell significantly in the past decade while that from Japan rose. The share of arrivals from some Eastern European economies in Europe has been increasing rapidly in recent years, albeit from a low base.

Large tourism resources and well-developed accommodations and infrastructures, the establishment of the European Union, the opening of the Channel Tunnel, the expansion of high-speed rail networks, the construction of large theme parks and the increasing tendency of travellers to take short-break holidays were conducive to sustaining intraregional flows in Western Europe.

The developed economies were also the main source of tourist expenditures, accounting for 81 per cent of the world total in 1995. Sixteen of the top 20 spenders in the world were developed economies. Germany overtook the United States and became the largest spender with expenditure of $50.8 billion in 1995, accounting for 15.8 per cent of the world total (compared with 14.3 per

Table X.2.
INTERNATIONAL TOURIST RECEIPTS OF THE LEADING EXPORTING COUNTRIES, 1980 AND 1994

Percentage change

Country[a]	Receipts 1980 (millions of US dollars)	Rank 1980	Receipts 1994 (millions of US dollars)
United States	10 590	1	66 740
France	8 257	3	24 796
Italy	8 959	2	23 906
Spain	6 958	4	21 629
United Kingdom	6 916	5	15 233
Germany	5 000	7	14 002
Austria	6 489	6	13 102
Switzerland	3 171	9	8 359
Hong Kong	1 317	17	8 239
China	617	29	7 323
Singapore	1 433	15	7 223
Canada	2 962	10	7 108
Mexico	3 202	8	6 363
Australia	1 137	20	6 098
Thailand	868	24	6 063
Belgium	1 817	12	5 556
Netherlands	2 248	11	5 434
Indonesia	173	53	4 575
Turkey	326	39	4 321
Portugal	1 148	19	4 148
Greece	1 733	13	3 905
Japan	640	28	3 477
Malaysia	317	42	3 376
Republic of Korea	369	36	3 340
Denmark	1 236	18	3 302
Taiwan Province of China	988	21	3 210
Sweden	963	23	2 822
Israel	980	22	2 498
India	1 552	14	2 452
Norway	759	25	2 194

Source: United Nations, based on data of IMF and WTO.
[a] Ranking in descending order by amount of receipts in 1994.

cent in 1970). The United States share declined from 22 per cent in 1970 to 14 per cent in 1995. Japan, the United Kingdom, France and Italy were the next largest spenders. These six countries accounted for more than half the total world international tourism expenditures. Among these six, Japan's share rose most spectacularly from 1.7 per cent in 1970 to 11 per cent in 1995. In dollar terms, its travel expenditure surged more than fivefold in the second half of the 1980s, mainly because of the appreciation of the yen and encouragement by

Table X.3.
RATIO OF TRAVEL RECEIPTS TO MERCHANDISE EXPORTS BY REGION, 1970-1995

Percentage

	1970	1980	1990	1994	1995
World	6.2	5.8	8.1	8.5	8.1
Developed economies	6.0	5.8	7.9	8.3	7.8
Developing economies of which:	7.5	6.0	8.8	9.2	9.0
Latin America	7.7	7.0	9.2	9.0	7.7
Africa	10.5	4.5	8.5	10.9	11.6
Western Asia	6.9	6.9	17.5	19.0	18.9
China	1.7	3.4	4.3	7.1	6.8
Eastern and Southern Asia	5.7	6.6	8.5	8.5	8.7
Transition economies	4.6	2.3	2.2	2.4	2.7

Source: United Nations, based on data of IMF and WTO.

the Government (particularly through its "10 million programme"[8]), as well as the reduced work week. By 1994, it was the third largest spender in the world, up from sixth place in 1980, and its travel deficit offset 18.9 per cent of its surplus in merchandise trade.

Most of the share of global travel receipts lost by the developed economies was taken by the developing economies and virtually all of that was assumed by Eastern and Southern Asia. This region accounted for about half of the total travel receipts in the developing economies by 1995. In 1994, out of the 12 developing economies that were among the world's top 30 destinations, 9 were from this region.[9] Africa and Latin America and the Caribbean, on the other hand, lost global shares substantially. Their combined earnings were $28 billion in 1995, less than half the earnings ($69.8 billion) of the United States.

The significance of travel receipts in export earnings and national income steadily increased in both developed and developing economies during the period 1970-1995 (see tables X.3 and X.4). Both ratios have remained somewhat higher in the developing economies than in the developed economies. In more than 30 developing economies and 10 developed economies, travel receipts were equivalent to more than 10 per cent of the value of exports of goods in 1994. In many of these countries, tourism had become the largest export item.

Among developed economies, the ratio of travel receipts to exports of goods in 1994 ranged from 1 per cent in Japan to 70 per cent in Greece. While the ratio was above 20 per cent in Austria, Greece, Malta, Portugal and Spain, it was below 5 per cent in Canada, Finland, Germany, Japan, the Netherlands and Sweden. The ratio of travel receipts to gross national product (GNP) varied from 0.1 per cent in Japan to 24 per cent in Malta.[10]

The variation in these ratios among developing economies was much larger, mainly reflecting the uneven distribution of tourist resources, different stages of development and differences in development strategies. In some island economies (such as Barbados, Cyprus and Seychelles), travel receipts were two

8 This programme was launched in 1987 to encourage Japanese to travel abroad in order to offset the trade imbalance. The goal of generating 10 million outbound travellers was met in 1991, ahead of schedule.

9 Hong Kong, China, Singapore, Mexico, Thailand, Indonesia, Turkey, Malaysia, the Republic of Korea, Taiwan Province of China, Israel and India (China, Indonesia, the Republic of Korea and Malaysia were not in the top 30 in 1980).

10 If both indirect and induced effects were included, the full impact on output would be much larger.

Table X.4.
RATIO OF TRAVEL RECEIPTS TO GNP BY REGION, 1970-1994

Percentage

	1970	1980	1990	1994
World	0.72	0.98	1.27	1.32
Developed economies	0.70	0.94	1.19	1.19
Developing economies				
of which:	0.86	1.16	1.74	1.97
Latin America	0.88	0.94	1.22	1.07
Africa	2.17	1.28	2.03	2.51
Western Asia	1.28	1.78	2.64	3.72
China	0.03	0.31	0.62	1.45
Eastern and Southern Asia	0.70	1.58	2.31	2.69
Transition economies	0.42	0.70	0.49	0.46

Source: United Nations, based on data of IMF, the World Bank and WTO.

to three times the value of merchandise exports in 1994, while in Bangladesh, the Congo, Gabon, Ghana, Kuwait and Nigeria, they were less than 1 per cent. In Costa Rica, the Dominican Republic, Egypt, Fiji, the Gambia, Haiti, Jamaica, Malta, Mauritius, Morocco, Nepal, Paraguay, Senegal, Tunisia, Turkey and Uruguay, the share was above 20 per cent. The share of travel receipts in GNP also ranged widely — from 0.1 per cent in Gabon to 31 per cent in Barbados.

In most developing economies where the ratio of travel receipts to exports of goods was high, travel receipts were the largest contributor to foreign exchange earnings, exceeding the value of those countries' traditional staple exports. Several developing countries now have a relatively well-developed tourist sector which, except for most island economies, has established fairly strong vertical linkages with the domestic economy. Low-cost labour and an abundance of natural and cultural attractions were dominant factors attracting tourists. In the Caribbean and North Africa, geographical proximity to developed countries was an advantage. In some distant island countries, the importance of travel receipts increased significantly as low-cost air transportation became available. Government promotion efforts were also crucial.

Apart from a slight surplus in 1993 (as a result of a surge in the surpluses of Italy and the United States), the travel account balance of the developed economies as a group has been in deficit since 1986, while that of the developing economies has been consistently in surplus since 1970. The total travel deficit of the developed economies widened to $6.7 billion in 1995, attributable mainly to deficits of $34.5 billion in Germany and $33.5 billion in Japan. The travel deficits of these economies widened rapidly after the value of their currencies appreciated as a result of the Plaza Agreement in 1985. More than half the developed economies, however, experienced a travel account surplus in 1995. For Australia, Austria, Greece, Portugal, Spain and the Unites States, which are mostly in sunbelt areas, a persisting sizeable surplus on the travel account has offset a significant part of the chronic deficits in their merchan-

dise trade. In the case of Spain, a travel surplus of $21 billion more than offset its merchandise trade deficit of $17.7 billion in 1995. Its large domestic tourism resources not only attracted foreign travellers but also kept outbound travel at a low level.

The travel account surplus of the developing economies as a whole increased steadily from $0.9 billion in 1970 to $34.6 billion in 1995, equivalent to 64 per cent of their total current account deficit in absolute value. This surplus almost doubled in the second half of the 1980s, owing mainly to a sharp increase in the surplus in Eastern and Southern Asia and Africa. For individual countries, these travel balances ranged from a deficit of $4.4 billion for Taiwan Province of China to a surplus of $4.3 billion for China in 1995. China, Cyprus, the Dominican Republic, India, Indonesia, Malaysia, Mexico, Singapore, Thailand, Tunisia and Turkey recorded surpluses of more than $1 billion in 1994, while Argentina, Brazil, the Republic of Korea, Taiwan Province of China and Venezuela incurred deficits of more than $1 billion. About two thirds of 79 selected developing economies had a surplus on their travel account. A shift from a deficit of $20 million in 1992 to a surplus of $3.0 billion in 1995 in Mexico and a steadily widening surplus from $0.7 billion in 1982 to $5 billion in 1995 in China were notable.

MAIN DETERMINANTS OF INTERNATIONAL TRAVEL

The rapid growth and increasing diversity of international travel during the last quarter century have been the result of complex interplays among a host of socio-economic, demographic, environmental, technological and institutional factors. These factors have had profound influences on all phases of the travel industry. They have changed the basis for competitiveness and affected the patterns of international travel expenditures.

Demand factors

Reflecting the heterogeneity of travellers with their different motives, a diversity of factors are involved in shaping the demand for international travel. Those engaged in leisure travel (holidaymakers) constitute the dominant group in both the developed and the developing economies and thus factors associated with this component play a predominant role. According to World Tourism Organization statistics, leisure travel was the purpose of 67.5 per cent of world travellers in 1993. Those engaged in business travel and those engaged in other-purpose travel, including visits to relatives and friends, represented much smaller but still significant proportions of world travellers with shares of 17.2 per cent and 15.3 per cent, respectively. The boundaries among these components, however, are often unclear, as travellers frequently seek to achieve more than one purpose in a given trip, combining, for example, business travel with pleasure travel.

While the globalization of businesses has stimulated international travel flows, the rapid expansion of travel demand has been driven mainly by growing income, the declining real cost of travel and increasing leisure time. The relaxation of restrictions on foreign travel and government and private promotion efforts have also stimulated travel. Increased travel flows have been further

facilitated by the spread of low-cost package tours. Other factors, such as immigration and migration of workers, political disturbances, economic troubles and bad publicity (such as diseases and attacks on tourists), have also affected travel flows.

Among these demand-side factors, income and the cost of travel are the most crucial. International tourism is a luxury consumption item in the consumer basket and is thus income elastic.[11] This is reflected in the significantly higher pace of tourism growth compared with GNP growth that was noted above. The proportion of discretionary income spent on travel tends to increase as income rises until a saturation level is reached. This positive relationship is also borne out in the broadly parallel cyclical movements of income and tourism demand. However, the responsiveness of tourism to cycles of income has been somewhat asymmetric, insofar as tourism is more responsive to upturns than to downturns, owing mainly to structural factors such as social benefits and globalization. The relationship to income is also reflected in the dominant share of high-income economies in global tourism expenditures.

Passenger fares are another important determinant of demand. In particular, the sharp fall in real air fares has made long-haul travel affordable and played a critical role in the expansion of international tourist flows in recent decades. The cost of travel is also affected by changes in exchange rates and inflation. Exchange-rate fluctuations, together with income and political disturbances, are the most important factors explaining short-term variations in tourism demand at the country level.

Increasing leisure time, resulting from the reduction of working hours and the steady extension of legally constituted holidays, has also supported the sustained growth of demand for travel. In the developed economies, the length of paid vacations ranges from two weeks in the United States to seven weeks in the Netherlands and this difference affects the duration of travel significantly. In the recent past, however, the attitude towards this entitlement has changed and the benefit has stopped increasing in most developed economies. This upper limit on leave entitlements has begun to be a constraining factor in respect of the growth of travel demand in a number of these countries.

The reductions in many countries of various restrictions on citizens wishing to travel abroad and on visiting tourists have also been important conducive factors for the rapid growth of international travel. In the case of the Republic of Korea, for example, the relaxation of restrictions on foreign travel caused outbound travel to surge by 30 per cent per annum in the second half of the 1980s. The recent integration of the transition economies into the world market has also led to a sharp increase of travel flows to a number of these countries in Eastern Europe and South-East Asia.

In parts of the world where regional integration has been progressing, there have been rapid increases in intraregional travel. In particular, flows of intraregional short-break holidaymakers, migrant workers and business travellers have been facilitated. In Europe, the Schengen Agreement signed in 1985 and the Schengen Convention concluded in 1990 reduced border controls to only spot checks between France, Germany and the Benelux countries and provided a basis for the free movement of travellers.

Despite such progress, there remain various barriers to the movement of persons in many countries. The main ones are direct administrative control on

11 In our estimation, the average income elasticity for the developed economies is 1.8 and that for the developing economies is 1.6. See D. Choi, "Preliminary estimation results of invisible trade model", paper presented to the spring 1995 Project LINK meeting.

entry and exit, such as visa requirements, passports and exit permits, and indirect controls, such as restrictions on foreign currency allowances and other laws and regulations which, although directed mainly towards immigration and the migration of workers, also affect travel. If the reduction of these barriers continues, it could unleash a tremendous amount of latent tourism demand in an increasing number of developing and transition economies.

Changing consumer preferences, in response to demographic changes and growing concerns about sociocultural and environmental conditions, have been increasingly affecting the nature of tourism demand in the developed economies. In particular, the ageing of baby boomers (those born shortly after the end of the Second World War) and their greater life expectancy have led to an increase in the pool of potential travellers. As the baby boomers became adults, their presence as a social group has been increasingly felt in the global tourism market. They are wealthier, more sophisticated and better informed than their predecessors and demand more variety, better quality, greater flexibility and more individualism in their holidaymaking. As a result, particularly in developed economies, there is occurring a slow shift from standardized mass tourism based on the conventional desire for "sun, sea and sand" to more flexible and differentiated forms based on a broader spectrum of ingredients, including culture, heritage, entertainment, nature, sports, learning, health and other special interests. The demand for these new tourism products has been rising rapidly.

The spread of low-cost mass tourism based on scale economies and standardization has facilitated the strong expansion in international tourism by enabling people at lower income levels to travel abroad. Although the growth of new forms of tourism recently began to outpace the rigidly packaged tours in developed economies, conventional mass tourism will continue to be the main vehicle of holidaymaking for awhile, particularly in developing and transition economies.

Restrictions on trade and foreign investment constrain business travel indirectly. Recently, stimulated by the globalization of business activities, business travel, including such conference services as trade fairs, exhibitions and seminars, has been rising rapidly. This, in general, is a more sophisticated, higher-priced and higher quality segment of international travel. Countries with large foreign trade and investment tend to generate and receive relatively greater numbers of business travellers. Within Europe, France, Italy and the United Kingdom are major destinations of business travellers. Business travel has also increased significantly in the past decade in emerging developing economies where foreign trade and investment have expanded rapidly.

In countries with former colonial and continuing cultural ties or large flows of migrant workers, immigrants and refugees, a large proportion of foreign travel involves visiting friends or relatives, as is the case for travel between France and her former colonies in Africa and Asia, travel between Germany and Turkey and Portugal, and travel between the United States and Viet Nam. More recently, large immigration and "guest worker" flows from some Asian countries to Australia, Canada, New Zealand and oil exporting countries in Western Asia resulted in a surge in travel by relatives on these routes.

Problems of water pollution, solid and liquid waste, damage to the ecosystem,[12] contamination of the traditional culture, crowding and increasing crime and disease in highly frequented locations have caused a growth in people's awareness of limits to the social and environmental capacity. This increasing

12 In particular, the destruction of rainforests and the extinction of rare flora and fauna.

concern has led to the emergence of new, environmentally conscious tourism and has caused a shift in demand towards new, less crowded and cleaner beaches and mountains and other special-interest tourism. This is reflected in the rapidly rising ecotourism, cultural tourism and agrotourism in an increasing number of countries. For example, Brazil and Costa Rica, which are endowed with rich biodiversity and beautiful natural scenery, have successfully developed ecotourism to avert further environmental degradation and at the same time diversify foreign currency earnings away from coffee, bananas and cattle farming.

Supply factors

The factors that determine the supply of international travel are many and complex, as travellers consume a variety of goods and services. The important ones are non-reproducible natural and cultural tourism resources (such as mountains, beaches, rainforest, hot springs, climatic conditions and cultural heritage), accommodation and infrastructure, human resources and technologies. These factors not only determine the supply capacity to meet the demand but also form the basis for the competitiveness and specialization of individual countries.

The traditional natural and cultural resources are the prime factors that attract tourists. These resources are mostly immobile and give an advantage to countries with an abundance of them. Quite a few developing economies in the Caribbean, North Africa and parts of Asia and the Pacific that do not possess other export alternatives or face dwindling exports of primary commodities, have successfully developed competitive tourism industries by taking advantage of their natural tourism resources and low wage labour. In the case of Malaysia, international tourism was promoted as a more durable alternative in the context of export diversification; by 1995, receipts exceeded the country's traditional exports, palm oil and crude petroleum.

The supply of tourism services crucially depends on the capacity and quality of accommodation, infrastructure and other tourist facilities. Transportation is particularly critical for international travel. All these facilities require large sums of capital.

Developed economies in general have well-established infrastructures. Some of these facilities (such as transportation networks) meet other needs, not only tourism-related ones. At the same time, the high demand for tourism within their domestic markets encourages the establishment of facilities dedicated exclusively to this activity. Nevertheless, quite a few developed economies, especially those with a high density of travellers, experience congestion in airports and road transportation networks during peak seasons and need to continue their efforts to alleviate these bottlenecks.

In most developing economies, the tourism industry is constrained by inadequate accommodations and infrastructures. Such countries lack the capital necessary to invest in these areas. Particularly in Africa, South Asia and Western Asia, direct air links to major sources of tourism demand are often not available and road networks are also poor, reflecting the lower level of development of the economy as a whole. In a number of dynamic economies in Eastern and Southern Asia, where the infrastructure is more developed, rapidly rising travel flows have, as in the developed economies, put strains on their capacities.

In many developing and transition economies, receipts per tourist are low

owing to inadequate hotels and their weak bargaining position as against large foreign package tour operators.[13] This low unit revenue adversely affects their ability to finance the required upgrading of facilities. In several developing economies, however, large multinational hotel chains have played an important role in tourism development and marketing. Through their superior management know-how, high-quality services and established global distribution networks, they can help maintain a higher level of tourist inflows. By facilitating the transfer of capital, technology, skills and management know-how, they also can help create the local endogenous capacity for a high-quality tourism industry.

Advances in transportation and information technologies, in particular the invention of jet aircraft and the introduction of the computerized reservation system (CRS), have brought about revolutionary changes in the international travel industry and reduced travel costs. These advances have facilitated the surge in mass tourism and have led to a profound transformation of virtually the entire tourism industry, from production through management and distribution to consumption.

The introduction of wide-bodied jet aircraft, such as the Boeing 747 in the 1970s, reduced long-haul travel time by 40 per cent, raised transportation capacities and reduced long-haul real air fares substantially. Nowadays, almost any destination in the world is within the reach of travellers at an affordable cost and within a reasonable time. Lower real air fares and increased carrying capacity were key contributing factors that supported the prolonged rapid growth of long-haul international travel. The spreading ownership of the private car and the introduction of high-speed rail networks have contributed to the rise in shorter-haul passenger travel.

The deregulation of the airline market and the introduction of large chartered aircraft also made a major contribution to the fall in real air fares in the 1980s. Since the Airline Deregulation Act allowing free price competition was passed in the United States in 1978, many countries have begun to deregulate their airline industries; this has included privatizing them and allowing foreign ownership and promoting competition. Privatization is being pursued in more than 40 countries. Since the carriers of the United States and other countries that have deregulated the industry have reciprocity-based traffic rights to other regulated countries, a two-level price system has emerged, which has resulted in a de facto overall price decline for scheduled traffic. Chartered carriers operating in non-scheduled traffic markets within a liberal environment also account for a substantial portion of the world market and have contributed to the falling cost of transportation. Competition has also forced scheduled carriers to lower their fares close to the level charged by charterers.

The travel industry has been increasingly able to capitalize on information technology at a time when travel options have burgeoned.[14] The main impact of information technology has been on the distribution and marketing segments of tourism. Among the many applications of information technology in the tourism industry, the CRS is by far the most important. Since its introduction as an internal airline automation instrument in 1964, the CRS has evolved into an extensive travel information system covering the distribution of airline services, hotel reservations, car rentals, tours, entertainment and financial services. This process has been intensified since United States airline deregulation in 1978. Such technology provides a basis for the flexible production of

13 In Morocco and Tunisia, for instance, average receipts per arrival were only about $350 in 1994, compared with $1148 in Singapore.

14 In terms of availability, prices, quality, air fares, schedules, new routes, reservations, bookings, airline tickets, hotel and car rentals.

new, differentiated products, customized to changing consumer preferences, that are cost-competitive with standardized mass tourism. It also enables providers of tourism services to integrate their operation across the entire range of related industries,[15] not only horizontally and vertically but also diagonally,[16] and to benefit from scale economies as well as scope economies[17] and system gains. Most developed economies with an advanced scientific and technological base, particularly in the transportation and the information sector, have an advantage in this regard.

One study shows that a CRS reduced the cost of a booking from $7.50 to $0.50 and raised a travel agency's productivity by 42 per cent.[18] The CRS has now become a major factor for competitiveness. It provides flexible itineraries and, since the late 1970s, has spread rapidly. By the early 1990s, more than 90 per cent of the travel agents in the United States were linked to a CRS. Carriers in other countries chose either to develop their own systems through regional consortia or to establish strategic alliances with systems from the United States.

The government plays a crucial role in the development of the tourism industry. In particular, many developing economies have made deliberate efforts to develop the tourism industry as a strategic sector for earning foreign exchange and broadening the export base. To this end, they have taken such measures as improving air transport connections to tourism-generating countries, developing new products, liberalizing the foreign exchange regime, devaluing their currencies, charging attractive tariffs for accommodations and privatizing the tourism sector. To overcome the shortage of investment funds, they have provided incentives to attract foreign investment and have encouraged joint ventures.

In the context of intensifying regional integration efforts, Governments have also been trying to eliminate restrictions on intraregional travel, deregulate transportation industries and harmonize laws, regulations and policies. Increasingly, they cooperate in pooling regional tourism resources, producing more attractive joint tourism products, developing regional infrastructures, protecting the regional environment and promoting their tourism products. Through cooperation, they can also enhance their bargaining power against major airlines and tour companies, accomplish more balanced regional economic development and promote regional sociocultural exchanges.

Globalization

Globalization and regional integration facilitate flows of persons directly or indirectly. On the demand side, the reduction of restrictions on the movement of persons and the reforms in the regulatory environment promote freer travel and thus widen the travel market. On the supply side, they contribute to the enhancement of the productivity and competitiveness of the tourism industry by introducing foreign competition and facilitating access to external factors of production, such as foreign capital, information technology, modern airline networks, management know-how and skilled labour. The impact, however, will differ among countries, depending on their stage of development, economic structure and regulatory environment. Because barriers in this industry are high and differences among countries are large, the liberalization of international travel offers large potential gains.

15 Such as financial services.

16 Diagonal integration is a process whereby firms use information technologies to logically combine various services so as to improve productivity and maximize profitability. See Auliana Poon, *Tourism, Technology and Competitive Strategies* (Wallingford, Oxon, United Kingdom, C.A.B. International, 1993), pp. 224-228. Note: "C.A.B." is the abbreviation for Centre for Agriculture and Biosciences.

17 Economies associated with the production of a range of items rather than a large quantity of identical units.

18 M. E. Guerin-Calvert and R. G. Noll, *Computer Reservations Systems and their Network Linkages to the Airline Industry*, Centre for Economic Policy Research Publication, No. 252, June (1991).

The freer movement of business and the intensification of competition as a result of globalization tend to concentrate control in the hands of a small number of large multinational hotel chains. There is some danger that these highly competitive large hotel chains will dominate local hotels which are, in general, small, less organized and in an inferior position in terms of capital, management know-how and marketing. In countries like France, Italy and the United Kingdom, where the tourism industry is based on a large number of small operations,[19] the impact of globalization can be large. Most locally owned hotels in developing countries are in a similar situation. For survival, small firms seek strategic alliances with large chains, mainly through franchising and management agreements, or specialize in niche markets tailored to special tourist interests. This process stimulates a more segmented market, with products in different price and quality ranges and across a variety of destinations.

19 In Italy, more than 90 per cent of hotel businesses are family-run small ones, mainly in the one-to-three-star hotel market.

CONCLUSION

Intensifying globalization and advances in technology, together with rising living standards and other structural factors, are expected to continue to play an important role in shaping the international travel industry into the twenty-first century. The freer movement of people and business, the spread of modern transportation and information technology, the formation of an affluent middle class in an increasing number of developing and transition economies, changing tastes and lifestyles in the developed economies, and continuing innovations in travel products and marketing are expected to sustain the rapid expansion of international travel, gradually changing its composition and destinational structure by fostering competition, enhancing productivity and quality and increasing variety. The Government's role in planning and harmonizing this process will continue to be important in many countries. Particularly in areas where tourism resources are overexploited, limits on social and environmental capacity will increasingly be felt and demand for remedial government action will increase.

For many developing and transition economies that have an abundance of tourism resources and low wage labour,[20] this industry can continue to serve as a strategic alternative avenue for foreign currency earnings. In particular, as modern air connections open up, an increasing number of developing economies that are geographically remote from the major sources of tourists will emerge as new competitive destinations in the world travel market. The change in the preferences of travellers towards new, unexplored destinations also favours such countries. Given their potential for tourism exports and their increasing awareness of the opportunities, the gradual shift in destinational structure towards these economies is expected to continue.

The freer movement of financial capital and travel enterprises will help overcome the difficulties in financing the development of the travel industry in developing and transition economies. In particular, the expansion of multinational hotel networks will continue and the combining of their capital and know-how with local low-wage labour and natural tourism resources will help augment competitiveness in the local travel industry. These multinational networks will also provide a marketing advantage. However, the content of the contractual arrangements between multinational hotel chains and local hotels is important

20 The proportion of wages and salaries in total costs is lower in the developing economies (14-20 per cent) than in the developed economies (25-33 per cent), with the lowest proportion recorded for South Asia and Africa (*United Nations Centre on Transnational Corporations (UNCTC), Transnational Corporations in International Tourism* (United Nations publication, Sales No. E.82.II.A.9), chap. V, tenth paragraph, and table 17.)

in determining the extent of their contribution to the local tourism industry.[21]

Developed economies can continue to build upon the advantage gained through their well-established domestic tourism industry and infrastructures, better technology and more abundant human and financial capital. The widening international networks of their highly competitive hotel chains, airlines and travel agencies, combined with globalizing information systems, will continue to be instrumental in bringing foreign travellers to these economies.

The new areas of tourism can provide opportunities to developed economies because of their superior capacities for product innovation, market segmentation and quality improvement. New or differentiated tourism products of higher quality, customized to special interests, can command higher prices and give an absolute advantage to these countries. In such areas, they can compete with low-wage developing economies by differentiating their products or upgrading product quality. By specializing in niche markets, small firms in these developed economies can find room for survival even under intense competition.

The liberalization of international travel and the multinationalization of businesses, including the travel industry, along with regional and global institutional arrangements, will continue to facilitate the expansion of the global travel market and to make national borderlines less distinct. The cost of international travel is already within the reach of the mass of potential tourists and international travel times are shorter. Multi-country tour packages have already blurred the boundaries of country specialization as tour operators cluster several destinations into one package, according to geographical proximity and complementary tourist attributes, so as to optimize travel cost and time. Changing lifestyles, growing affluence, demographic changes and evolving work organizations brought about by spreading long-distance services will also have far-reaching implications for travel activities in the coming century.

21 M. T. Sinclair, P. Alizadeh and E. Onunga, "The structure of international tourism and tourism development in Kenya", in *Tourism and the Less Developed Countries*, David Harrison, ed., London, (Belhaven Press, 1992).

XI CONFRONTING THE CO_2 EMISSIONS PROBLEM

Energy use is central to economic growth, but also to social issues that affect sustainable development, such as poverty, access to social services, environmental quality and global warming. Today's world is characterized by a rapidly rising energy demand, most notably in the rapidly growing developing countries. As people have become richer and more numerous, their demand for the services of energy-using capital and end-use durables, such as automobiles and electrical appliances, has mushroomed. Providing adequate energy supplies and services to meet these growing needs, while at the same time safeguarding the environment, poses a major challenge to policymakers worldwide. At present, about 7.3 billion tons of oil equivalent (toe) of fossil fuels are consumed annually. On average, over three quarters of these fuels are carbon, which is being emitted into the atmosphere. If nothing is done to change current energy consumption patterns and fuel mix, it is likely that carbon emissions will double in 25-30 years, and treble in 45-50 years, with possible consequences of climate change. What is needed today is a global recognition that current energy patterns are leading the world down a path that is unsustainable.[1] Slowing the growth of carbon dioxide (CO_2) emissions into the atmosphere is clearly essential.

In light of the growing concerns over global warming, the international community needs to develop technology and policy options that, when fully adopted, reduce the anticipated growth in the use of energy resources.[2] The prospects, however, for curtailing the growth in the use of such resources are uncertain and the policies needed to maintain the curtailment are still being negotiated. As a contribution to the debate, the present chapter explores how CO_2 emissions are likely to evolve under alternative assumptions regarding efficiency improvements and how regional energy consumption and emissions patterns are likely to shift over the next several decades. This chapter shows that present policies to stabilize CO_2 emissions within the developed economies at 1990 levels by the year 2000 will fall short of solving global environmental problems. This underscores the need to adopt international along with regional approaches to greenhouse gas abatement strategies that are consistent with the objectives of the United Nations Framework Convention on Climate Change (FCCC).[3]

1 United Nations Development Programme, *Energy After Rio: Prospects and Challenges*, (authors: Amulya K.N. Reddy, Robert H. Williams and Thomas B. Johansson) (United Nations publication, Sales No. E.97.III.B.II.)

2 "Global change and sustainable development: critical trends: report of the Secretary-General" (E/CN.17/1997/3 and Corr.1), sect. III.

3 Document A/AC.237/18 (Part II)/Add.1 and Corr.1, Annex I.

DIMENSIONS OF ENERGY DEMAND AND CO_2 EMISSIONS

Atmospheric concentrations of a number of greenhouse gases are essential for the existence of life on earth, as they trap some of the heat radiated by the sun in the atmosphere; but the atmospheric concentration of such gases as methane (CH_4), nitrous oxide (N_2O), chlorofluorocarbons (CFCs), and CO_2 have increased significantly since pre-industrial times. The concentration of these so-called greenhouse gases in the atmosphere continues to increase at a rapid rate as a result of emissions from human activities. A further rapid rise in the concentration of these gases in the atmosphere is expected to lead to a warming of the earth's average surface temperature - a phenomenon commonly called global climate change - with uncertain but potentially grave consequences.

Prior to the Industrial Revolution, the concentration of greenhouse gases remained nearly constant throughout modern human history about 280 parts per million by volume (ppmv) (0.028 per cent of the atmosphere's volume). However, according to the Intergovernmental Panel on Climate Change[4] (IPCC), those concentrations increased to about 360 ppmv.[5] As a result, the world surface temperature has risen by 0.3° C - 0.6° C (Celsius) within the last 100 years. During this same period, the global sea level has risen by between 10-25 centimetres (cm), with much of the rise having possibly been induced by the increase in global temperature.

IPCC also estimated that CO_2 has contributed about 65 per cent of the combined radiative effects (a measure of global warming) of the major greenhouse gases over the past 100 years.[6] According to one of the climate scenarios most often cited, the IS92 of IPCC, the world may see an increase of the atmospheric CO_2 concentration ranging from about 480 ppmv to 960 ppmv by the year 2100. This rise in concentration is expected to lead to an increase of average surface temperature of 1.0° C - 3.5° C by the year 2100, with a best estimate of 2.0°C.

There is still considerable uncertainty regarding the timing, magnitude, regional manifestations and nature of climate change. The consensus, however, is that the continuing emissions of greenhouse gases, such as CO_2, may lead to a rise in global mean temperature. The rise in temperature, scientists warn, will have a variety of effects, including a rise in sea levels and major changes in wind and rainfall patterns, as well as adverse impacts on biodiversity and ecosystems. Such a drastic change might have enormous economic and social implications and pose huge threats to low-lying coastal areas and small islands.

The major anthropogenic source of CO_2 emissions is the combustion of fossil fuels (oil, gas and coal) to produce energy. As such, fossil fuel consumption levels are critical to the analysis of the accumulation of CO_2 in the atmosphere and the determination of the likelihood and timing of climate change.[7]

Between 1975 and 1994, annual growth in world commercial energy use averaged 1.3 per cent in the developed countries, 2.0 per cent in the former centrally planned economies and 5.5 per cent in the developing countries. Despite this high rate of growth of energy consumption in developing countries, current per capita consumption in developed countries is more than 20 times that in a large number of developing countries. In Africa, for example, per capita commercial energy consumption in 1994 amounted to only 305 kilograms of oil equivalent (kgoe) per year, compared with about 8,000 kgoe in the United States of America.

At present, nearly 90 per cent of the world's primary commercial energy

4 The Intergovernmental Panel on Climate Change was established in 1988 by the World Meteorological Organization and the United Nations Environment Programme to provide assessments of climate change to policy makers. It has three working groups, focusing respectively on the science of climate change, the environmental, social and economic impacts of climate change, and response strategies.

5 Intergovernmental Panel on Climate Change, *Climate Change 1995: The Science of Climate Change*, Contribution of Working Group I to the Second Assessment Report of the Intergovernmental Panel on Climate Change, J. T. Houghton and others, eds. (Cambridge, United Kingdom, and New York, Cambridge University Press, 1996).

6 Intergovernmental Panel on *Climate Change, Climate Change 1995: Impacts, Adaptations and Mitigation of Climate Change: Scientific-Technical Analyses*, Contribution of Working Group II to the Second Assessment. Report of the Intergovernmental Panel On Climate Change, Robert T. Watson, Marufu C. Zinyowera and Richard H. Moss, eds. (Cambridge, United Kingdom, and New York, Cambridge University Press, 1996), p. 21.

7 While most of the human-induced CO_2 emissions come from energy consumption, there are other industrial processes that also emit CO_2 through non-combustion processes. These include calcination of limestone in cement production, steel-making, extraction of shale of oil from carbonate rocks, and flaring of natural gas associated with oil production. Other sources include the burning of trees and grasslands. IPCC has estimated that the combustion of fossil fuels accounts for about 6 billion tons of carbon released per annum, while land-use change contributes approximately another 1.6 billion tons. See Intergovernmental Panel on Climate Change, *Climate Change 1992: The Supplementary Report to the IPCC Scientific Assessment*, J. T. Houghton, B. A. Callander, and S. K. Varney, eds. (Cambridge, United Kingdom, Cambridge University Press, 1992), p. 8.

consumption needs are met by fossil fuels. Between 1975 and 1994, world energy consumption increased by about 55 per cent, while energy-related carbon emissions grew 40 per cent, from about 4.3 billion to 6 billion metric tons[8] (figure XI.1). CO_2 emissions grew two and a half times in the developing countries, compared with 15 per cent in the developed countries over the same period. However, the developed countries accounted for about 50 per cent of the global CO_2 emissions in 1994. The developing countries accounted for 36 per cent and the economies in transition for 14 per cent. The seeming levelling-off of CO_2 emissions in recent years is due almost entirely to the sharp fall in energy consumption in the successor States of the former Union of Soviet Socialist Republics (USSR) following the disintegration of the USSR.

On a country-by-country basis, the United States accounted for 25 per cent of energy-related CO_2 emissions, followed by China at 13 per cent and the Russian Federation at 8 per cent. Together these three countries accounted for nearly half the emissions in 1994. Five of the 15 countries with the highest energy-related CO_2 emissions in 1995 (China, India, Mexico, the Republic of Korea and South Africa) were from the group of developing countries (see table XI.1).

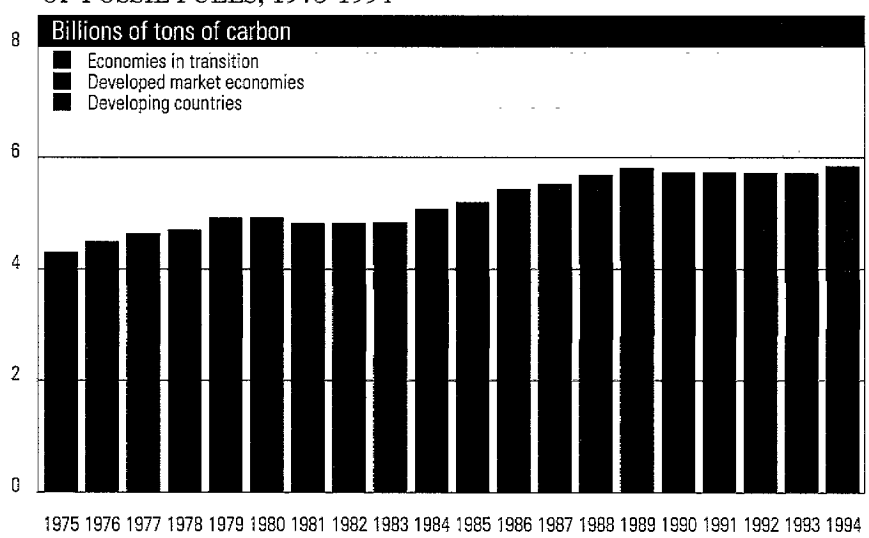
Over the past two decades, close to 1 billion people in developing countries have become newly connected to electricity grids.[9] Despite this remarkable achievement, nearly 2 billion people still have no access to electricity and over 2 billion people are estimated to rely almost exclusively on biofuels, such as crop residues, animal dung and wood, for cooking. Close to 90 per cent of the population in many sub-Saharan African countries has almost no access to commercial energy (or is unable to afford it).

As economic growth in the industrialized countries continues and economic activity in the economies in transition rebounds, the need of these economies

8 There are two ways of measuring CO_2 emissions: (a) in terms of carbon (in other words, by measuring -- as in this chapter -- just the carbon content of the CO_2 and (b) in terms of the full molecular weight. Since carbon has an atomic weight of 12 and oxygen has an atomic weight of 16, the carbon emitted from the combustion of fossil fuels can be converted to CO_2 emissions measured as CO_2 by multiplying the mass of emitted carbon by 44/12.

9 Dennis Anderson, "Energy, Environment and economy: complementarities and conflicts in the search for sustainable growth", paper presented at the World Energy Council 16th Congress, Tokyo, 8-13 October 1995.

Figure XI.1.
GLOBAL CO_2 EMISSIONS FROM THE COMBUSTION OF FOSSIL FUELS, 1975-1994



Source: United Nations.

Table XI.1.
ESTIMATED ENERGY-RELATED CO_2 EMISSIONS IN THE 15 COUNTRIES WITH HIGHEST EMISSIONS IN 1994

Country	CO_2 emissions (millions of tons of carbon)	Gross national product (GNP) (billions of dollars)	Population (thousands)	GNP per capita (dollars)		Emissions per capita (Kilograms of carbon per year)	Emissions intensity (Kilograms of carbon per $1,000 of GNP)	
				Exchange rate conversions [a]	PPP conversions [b]		Exchange rate conversions [a]	PPP conversions [b]
United States	1 500	6 737	260 529	25 860	25 860	5 758	222	222
China	777	630	1 190 918	530	2 510	652	1 233	260
Russian Federation	457	392	148 366	2 650	5 260	3 080	1 166	587
Japan	342	4 321	124 782	34 630	21 350	2 740	79	128
Germany	249	2 075	81 141	25 580	19 890	3 069	120	154
India	195	279	903 600	310	1 290	216	699	168
United Kingdom	157	1 069	58 088	18 410	18 170	2 703	147	149
Canada	128	570	29 121	19 570	21 320	4 395	225	207
Italy	112	1 101	57 154	19 270	18 610	1 960	102	106
Ukraine	106	81	51 465	1 570	3 330	2 060	1 309	617
Korea, Republic of	105	366	44 563	8 220	10 540	2 334	286	223
France	104	1 355	57 726	23 470	19 820	1 802	77	91
Poland	93	95	38 341	2 470	5 380	2 426	979	449
South Africa	93	125	41 591	3 010	-	2 236	744	-
Mexico	85	369	91 858	4 010	7 050	925	230	131
Rest of the world	1 499	6 228	2 424 757	2 568	-	618	240	-
World total	6 002	25 793	5 604,000	4 603	-	1 071	232	-

Source: United Nations, based on data from the *World Bank Atlas 1995* (Washington, D.C., World Bank, 1995).
[a] Converted into dollars using *World Bank Atlas* methods.
[b] Converted into dollars using purchasing power parities, as per *World Bank Atlas*.

for more energy will be added to the rapidly growing demand in many of the developing countries. Taking these demand considerations together with the increasing population and the growing weight of the developing countries in the world economy, there is considerable reason to expect substantial growth in world energy demand. The questions are how much energy will be used and how large the opportunities are for energy conservation and improvements in efficiency.

SCENARIOS FOR ENERGY DEMAND AND CO_2 EMISSIONS

One strategy for looking at the possible future growth of energy demand and CO_2 emissions is to analyse alternative scenarios, beginning with a continuation of historical relationships and introducing various alternative assumptions regarding policy and technology assumptions.

Over the past several years, there have been a number of forecasts regarding the future trends of energy demand and CO_2 emissions.[10] They all offer the same broad conclusion: world energy demand will grow rapidly over the next few decades, mainly because of the growth of population and income in the developing world. In the developed countries, energy demand will continue growing, but at slower rates than in developing countries. In most cases, energy

[10] For example, projections have been made by the World Energy Council (WEC) (1993), the International Institute for Applied Systems Analysis and World Energy Council (IIASA/WEC) (1995), the Intergovernmental Panel on Climate Change, and the International Energy Agency (IEA) (1994).

Table XI.2.
MAIN ASSUMPTIONS IN THREE SCENARIOS OF GLOBAL ENERGY DEMAND AND CO_2 EMISSIONS

	Do nothing			Modest efficency gains			Forceful efficiency gains		
	1996 - 2010	Period 2011 - 2030	2031 - 2050	1996 - 2010	Period 2011 - 2030	2031 - 2050	1996 - 2010	Period 2011 - 2030	2031 - 2050
GDP growth rates (percentage/year)									
Developed countries	2.5	2.0	1.5	2.5	2.0	1.5	2.5	2.0	1.5
Economies in transition	3.0	2.0	1.5	3.0	2.0	1.5	3.0	2.0	1.5
Developing countries	4.5	3.5	3.0	4.5	3.5	3.0	4.5	3.5	3.0
Oil prices	Remain constant in real terms			Rise by 1 per cent per year in real terms			Rise by 1 per cent per year in real terms		
Efficiency gains (percentage/year)	No new policy-driven efficiency gains								
Developed countries				0.2	0.5	0.8	0.5	1.2	1.5
Economies in transition				0.0	0.5	0.8	0.2	1.0	1.5
Developing countries				0.0	0.3	0.6	0.1	0.8	1.2

supply is expected to remain abundant although supply shortages could occur, particularly if investment in the energy sector does not keep up with the growth in demand.

While a large growth in world energy demand is anticipated, there also appears to be enormous potential for offsetting much of this growth through improved efficiency in energy-using technologies. Demand for energy in the developing world is projected to surpass that in the developed economies at around the year 2010, its current share (one third) of global energy demand rising to about one half in 20 years and two thirds in 50 years. As a result, most of the growth in CO_2 emissions will be accounted for by the developing countries.

The scenarios[11] presented below of global energy demand and CO_2 emissions are based on assumptions about the following key variables: (a) future economic growth, (b) future oil prices (c) population growth and (d) energy efficiency gains, expressed as a fraction of total energy saved per year owing to advances in technology. These assumptions are outlined in table XI.2.[12] The three cases presented provide an indication of the general direction and possible evolution of worldwide energy and carbon emissions trends under these particular assumptions.

Energy demand

In the "Modest efficiency gains" scenario, it is assumed that energy-saving technologies similar to those available today in the developed countries will

11 These scenarios have been generated by a simulation model developed at the former Department for Economic and Social Information and Policy Analysis of the United Nations Secretariat. The model projects alternative energy demand and CO_2 emissions trends by fuel type over periods up to the year 2050.

12 Assumptions of GDP growth rates are broadly similar to those used in the Middle course scenario of the International Institute for Applied Systems Analysis and World Energy Council in *Global Energy Perspectives to 2050 and Beyond: Report 1995* (London, 1995). Estimates of population growth rates are those of the medium- variant scenario of the Population Division of the United Nations Secretariat in *World Population Prospects: The 1996 Revision* (United Nations publication, forthcoming).

become more widely used, partly as a result of transfer of technologies to developing countries and partly in response to action by policy makers. It is also assumed that fossil fuel efficiency will improve slowly in all regions, particularly after the year 2010, with efficiency gains ranging from 0.2 to 0.8 per cent per year. It is further assumed that the real price of oil will rise very slowly but steadily until the year 2050. Under this scenario, world commercial energy demand is projected to grow at an annual average rate of 2.0 per cent over the projection period. This would mean a near-doubling of the present levels of consumption by the year 2025 and a 2.6-fold expansion by 2050 (see figure XI.2). Results from this scenario are consistent with the middle course scenario (scenario B) of IIASA/WEC,[13] and with the projection of the Global Environment Outlook.[14]

With their demand expected to rise at the rate of 3.1 per cent per annum, the developing countries are expected to account for over three quarters of the growth in world energy demand, with their share rising by two-fifths by the year 2010 and by two-thirds by the year 2050. Total commercial energy demand in the developed market economies is projected to grow by 1.0 per cent per annum, while in the economies in transition, energy demand is expected to grow at an average rate of 1.2 per cent per year. Energy demand both in the developed market economies and in the economies in transition is expected to reach a plateau around the year 2030 after which energy demand will begin to decline.

Although per capita consumption of energy in the developing countries is expected to continue rising rapidly, it will still be far below that of the industrialized countries. In 1994, per capita consumption in the developing countries was around 540 kgoe per year. By the year 2050, it will rise threefold, but this amounts to just under one fifth of the per capita energy consumption of the developed market economies.

At present, nuclear power and renewable sources of energy (NRSE) account for about 10 per cent of the world's primary commercial energy consumption. By the year 2050, they might provide for about 20 per cent of total commercial energy demand, with their share rising rapidly in all regions.[15]

The "Do nothing" scenario reflects a continuation of current energy consumption patterns, where authorities in many countries pay little or no attention to policies aimed at conserving energy and improving efficiency (in other words, it assumes there will be no new policy-driven gains in energy efficiency). Energy consumption and production continue to be subsidized in many countries, and no major energy-saving technological breakthrough or conservation by consumers is anticipated. The price of oil remains constant in real terms over the projection period. Under this scenario, the world would consume twice as much energy in the year 2025 as it does today. By 2050, it would use three and one half times more energy than it uses today. The rise in global energy demand in this case would be almost 20 billion toe over the 55 years to the year 2050, with the developing countries accounting for about 15 billion toe, or 74 per cent. Much of the demand growth would be supplied by fossil fuels, with the share of NRSE rising to only 14 per cent by 2050.

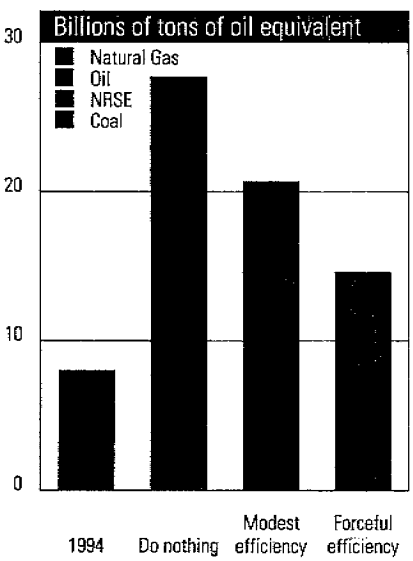
In the "Forceful efficiency gains" scenario, which reflects a low energy path, there is increasing application of new technologies to reduce energy use as concerns about the environment grow. Major manufacturers of industrial equipment, building materials, household appliances and automobiles are induced to

13 International Institute for Applied Systems Analysis and World Energy Council, *Global Energy Perspectives to 2050 and Beyond: Report 1995* (London, 1995), p. 49, table 5.1.

14 United Nations Environment Programme, *Global Environment Outlook* (New York, Oxford University Press, 1997), p. 216, table 4.1.

15 These results are rooted in historical trends. Therefore, they should be treated with caution, particularly in the case of renewable sources of energy. Given their recent origin as well as their environmentally benign nature, renewable energy technologies could play a much larger role in the future energy mix.

Figure XI.2.
PROJECTED COMMERCIAL ENERGY CONSUMPTION BY FUEL TYPE: THREE SCENARIOS FOR THE YEAR 2050



Source: United Nations.

adopt more energy-saving products, and additional energy taxes and regulations are imposed. New technologies gradually emerge, leading to gains in energy efficiency of up to 1.5 per cent per annum. Under such circumstances, world energy demand will rise at an average rate of only 1.1 per cent per annum over the projection period, but much more slowly after the year 2030. In both the developed market economies and the economies in transition, energy demand will continue rising very slowly before beginning to decline around the year 2010. In the developing countries, energy demand will rise steadily at about 2.6 per cent per annum over the projection period. Overall, the world would use about 50 per cent less energy than in the "Do nothing" scenario, but nearly twice as much energy as is currently consumed. Under this scenario, by 2050, NRSE could account for 25 per cent of overall energy consumption.

Energy intensity

One way to interpret the results of these scenarios is in terms of their implications for energy intensity.[16] In general, trends of energy intensity are influenced by the structure of the economy, existing technologies, energy mix and fuel prices.[17] While energy intensities worldwide have fallen since the early 1970s, energy intensities in developing countries have not declined. Moves by developing countries towards industrialization are usually accompanied by urbanization, electrification and modernization, all of which entail increasing use of commercial energy and hence a rise in energy intensities. During the

16 Energy intensity is defined as the energy required to produce a unit of economic output (in other words, as energy consumption divided by real GDP).

17 Energy intensity tends to increase during the early phase of industrialization until it reaches a plateau, after which it begins to decline. The replacement of non-commercial energy, such as wood and farm waste, by commercial energy, such as fossil fuels and primary electricity, during the transition from a rural, less developed society to an urban, industrialized society is a common feature of the development process which requires greater use of energy.

Table XI.3.
PROJECTED RATES OF CHANGE IN ENERGY INTENSITY, 1995-2050

Percentage per year

	Do nothing	Modest efficiency gains	Forceful efficiency gains
Developed market economies			
Oil	-1.5	-2.2	-3.1
Gas	-1.0	-1.6	-2.2
Coal	-0.9	-1.5	-2.1
NRSE	0.6	-0.6	-2.3
Total	-0.8	-1.6	-2.5
Economies in transition			
Oil	0.1	-0.5	-1.1
Gas	-0.5	-1.6	-2.8
Coal	-1.3	-1.8	-2.4
NRSE	-1.7	-0.3	-0.2
Total	-0.6	-1.2	-1.9
Developing countries			
Oil	-0.3	-1.0	-1.8
Gas	1.3	0.8	0.1
Coal	-0.7	-1.5	-2.6
NRSE	0.2	1.6	2.1
Total	0.0	-0.4	-1.0

Source: United Nations.

process of industrialization, it is often difficult to decouple economic growth from energy demand, particularly in the absence of strong energy efficiency measures. Energy intensity is higher in countries with artificially low energy prices (mainly in the economies in transition and major oil exporting countries).

Energy intensities in the world as a whole are projected to decline steadily over the projection period under almost all scenarios (see table XI.3). In the Modest efficiency gains scenario, energy intensities will decline by an average annual rate of 1.6 per cent in the developed market economies, 1.2 per cent in the economies in transition and 0.4 per cent in the developing countries. In all three scenarios, however, energy intensity in the developing countries is expected to continue rising slowly before it stabilizes and starts to decline around the year 2010. In the developed countries and in the economies in transition, energy intensity will decline steadily, but at somewhat faster rates in the last two decades of the projection period.

CO_2 emissions

There are significant differences in the regional pattern of CO_2 emissions that emerge under the three scenarios (figure XI.3). By the middle of the next century, the share of the developed countries in global emissions is projected to drop to less than one third while that of the developing countries will grow to at least two thirds of the total. The reason for this shift is apparent from the pattern of energy consumption presented above, where energy consumption growth rates in developing countries are more than twice as high as those in the developed countries or the economies in transition. In the Do nothing scenario, about 8.3 billion tons will be emitted into the atmosphere by the year 2010. This figure can be expected to more than double by the year 2050, rising to 19 billion tons, two thirds of which will be accounted for by developing countries.

In the Modest efficiency gains scenario, significantly lower CO_2 emission levels can be achieved in all groups of countries, most notably in the developed market economies, where emissions are expected to remain at almost the same level after the year 2010. Much more radical reduction in the growth of carbon emissions is possible under the Forceful efficiency gains scenario. In this case, growth in CO_2 emissions worldwide is not expected to exceed 0.7 per cent per annum over the projection period. This growth will be entirely accounted for by the developing countries after the year 2010. What distinguishes this scenario from the other two is that global CO_2 emissions can be expected to decline after they peak at 8.9 billion tons by the year 2030 and that overall per capita CO_2 emissions will decline on average by 0.2 per cent per annum. The fall in the per capita emissions of carbon will be more pronounced in the developed market economies, but will still be 4 to 5 times higher than in the developing countries. By contrast, in the Do nothing scenario, per capita carbon emissions can be expected to rise in all regions.

Annual CO_2 emissions for the three scenarios described above are shown in figure XI.4. Cumulative carbon emissions resulting from these scenarios between 1995 and 2050 range from 222 billion tons of carbon for the Forceful efficiency gains scenario to 319 billion tons of carbon for the Do nothing scenario.[18] When these emissions are added to the current concentration[19], cumulative emissions, by 2050, are projected to be 1070 billion tons under the "Do

[18] Assuming an airborne fraction of 50 per cent (in other words, that 50 per cent of the carbon produced from the burning of fossil fuels remains airborne in the atmosphere).

[19] Current estimates of the atmospheric content of CO_2 are taken to be approximately 750 billion tons of carbon. No carbon cycle model was used to estimate the atmospheric concentrations of CO_2 expressed in ppmv.

nothing" scenario, 1020 billion tons (Modest efficiency) and 970 billion tons (Forceful efficiency). While all three levels of concentration are less than the doubling of the pre-industrial concentrations, a figure taken to be 1,200 billion tons of atmospheric CO_2 concentrations (or 565 ppmv of CO_2)[20] the Do nothing and the Modest efficiency scenarios might do a great deal of damage to the environment since the doubling date could occur before the year 2100 (assuming the same trends continue after 2050). The doubling date of the CO_2 from all emission sources should be earlier than that of energy-related CO_2 alone. The doubling of CO_2 concentrations is believed to be dangerous; at this level, CO_2 would trigger a rise in the mean global temperature of about 2.5°C.[21] The question is whether that dangerous situation can be avoided.

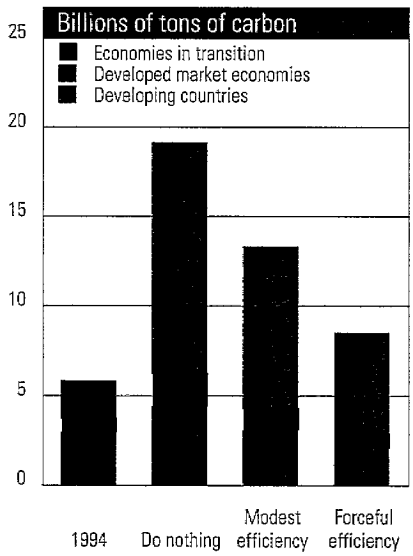
ENERGY SUPPLY OPTIONS AND POLICIES

Reflecting widespread concerns about the potential threat of global warming, over 150 countries at the United Nations Conference on Environment and Development in Rio de Janeiro in 1992 signed the United Nations Framework Convention on Climate Change. This Convention, which entered into force on 21 March 1994, has been ratified by over 160 member countries. It calls for measures to counteract the greenhouse effect. Its signatories are required to formulate plans to reduce greenhouse gas emissions but implementation is not bound by the Convention. To this end, the ultimate objective of the Convention is "stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a time-frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened, and to enable economic development to proceed in a sustainable manner" (article 2 of the United Nations Framework Convention on Climate Change).

Adequacy of commitments

While the Convention does not yet contain specific targets and timetables for the stabilization of greenhouse gas emissions, member States of the Organisation for Economic Cooperation and Development (OECD) and countries from eastern Europe, referred to as Annex I countries[22] committed themselves in 1992 to adopting voluntary measures to mitigate climate change and to providing information on policies and measures aimed at returning their emissions of CO_2 and other greenhouse gases to 1990 levels by the end of this decade. There was a diversity of approaches to voluntary target commitments by OECD countries; a number of them (Austria, Canada, Denmark, Iceland, Luxembourg, the Netherlands and Switzerland) established unilateral and unconditional commitments to targets, but others set conditions to achieve their own targets (see table XI.4). Various modifications and clarifications have been made since 1992 when most of the targets were announced. Even though most of these countries are thus implementing policies to limit greenhouse gas emissions, only a few of them are likely to achieve levels of emissions by the year 2000 that do not surpass those of 1990. According to a new proposal currently under consideration, each of the Annex I Parties shall reduce its 1990 level of anthropogenic emissions of CO_2 by at least 20 per cent by the year 2005.[23]

Figure XI.3.
PROJECTED CO_2 EMISSIONS: THREE SCENARIOS FOR THE YEAR 2050



Source: United Nations.
Note: The level of CO_2 emissions under the "Do nothing" scenario is comparable with that of IPCC's IS92e scenario; the level under the Modest efficiency scenario is comparable with that of IPCC's IS92a scenario; and the level under the Forceful efficiency scenario is comparable with that of IPCC's IS92d scenario (see IPCC, *Climate Change 1995: The Science of Climate Change*, Contribution of Working Group I to the Second Assessment Report of the Intergovernmental Panel on Climate Change, J. T. Houghton and others, eds. (Cambridge, United Kingdom, and New York, Cambridge University Press, 1996).

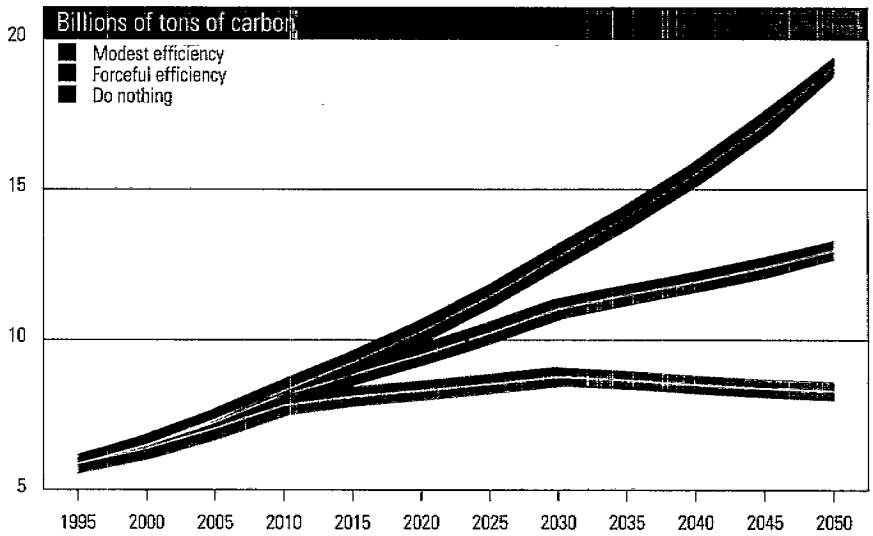
20 William Nordhaus and Zili Yang, "A regional dynamic general equilibrium model of alternative climate-change strategies", *The American Economic Review*, vol. 93, No.4 (September 1996), p.750.

21 Intergovernmental Panel on Climate Change, *Climate Change 1995: The Science of Climate Change*, Contribution of Working Group I to the Second Assessment Report of the Intergovernmental Panel on Climate Change, J. T. Houghton and others, eds. (Cambridge, United Kingdom, and New York, Cambridge University Press, 1996), p.60.

22 Annex I countries include all OECD countries plus Belarus, Bulgaria, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Romania, the Russian Federation, Slovakia and Ukraine.

23 Document FCCC/AGBM/1997/3/Add. 1, para. 110 (a).

Figure XI.4.
PROJECTED GLOBAL CO_2 EMISSIONS FROM FOSSIL FUEL CONSUMPTION



Source: United Nations.

Energy-related CO_2 emissions in OECD countries are estimated to have risen by about 4.6 per cent between 1990 and 1995 (see table XI.5). However, only a handful of countries (Austria, France, Germany, Italy, Switzerland and the United Kingdom of Great Britain and Northern Ireland) appear to be heading towards achieving levels of energy-related CO_2 emissions by the year 2000 that are less than those of 1990. Even if these commitments were fully achieved by all OECD countries, projected global energy-related emissions would be reduced by only 4 per cent by 2000 under the scenarios discussed above; instead of rising by 15 per cent between 1990 and 2000, global emissions would grow by 11 per cent. The improvement is small because emissions reduced due to commitments by a few countries will be offset by growth in emissions elsewhere. This underscores the need for wider action plans to reduce emissions. A global target requires assuring that the sum of commitments by all countries meets the target.

A large number of developing countries have repeatedly voiced their concern that, while Agenda 21[24] addressed the role of energy and its impact on climate change, it did not adequately deal with the sustainable development concerns of those developing countries that lack adequate energy resources to support economic development. As a result, they have stressed their limited obligations under the United Nations Framework Convention on Climate Change and have objected to proposals that would imply a need for them to agree to reduce their emissions without both adequate funding and technology transfer from developed countries. Nevertheless, most developing countries recognize the need to participate in the global effort to reduce the emissions of greenhouse gases to the extent that this does not impede their economic and social development progress.

24 *Report of the United Nations Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992*, vol. I, *Resolutions Adopted by the Conference* (United Nations publication, Sales No. E.93.I.8 and Resolution, Annex II and Corrigendum).

In the first session of the Conference of the Parties to the United Nations Framework Convention on Climate Change held in Berlin in March-April 1995, participants acknowledged that developed countries were not undertaking commitments commensurate with the Convention's objective, despite their attempts to return their greenhouse gas emissions to 1990 levels by the year 2000. No new commitments were introduced for developing countries. However, at the second session of the Conference of the Parties to the Convention, convened in July 1996 in Geneva, participants agreed to speed up negotiations on the text of a legally binding protocol or another legal instrument to be submitted for adoption at the third Conference of the Parties to the Convention, scheduled to be held by the end of 1997 in Kyoto, Japan. Agreements on targets and a time-frame in which to achieve them will require concerted efforts from both industrialized and developing countries to find efficient and equitable procedures for controlling greenhouse gas emissions at the global level.

The need for energy to sustain economic growth and improve the quality of life and the necessity to reduce greenhouse gas emissions and safeguard the environment has been a contentious issue between developed and developing countries. There is a mismatch between those economies that can still grow without much need for additional energy (namely, the developed countries) and those that cannot grow without additional supplies of energy (namely, the developing countries). Because of the present lack of available technologies to absorb CO_2 emissions, abatement policies must focus more on source reduc-

Table XI.4.
CHARACTERIZATION OF 1992 COMMITMENTS BY OECD MEMBER COUNTRIES IN REGARD TO CLIMATE CHANGE POLICY

Unilateral, unconditional commitments to targets (Austria, Canada, Iceland, Luxembourg and Switzeland) of which two elaborated by funded plans of action and supported by carbon or CO_2 taxes (Netherlands and Denmark)
Unilateral, but preliminary non-binding and /or conditional commitments to targets (Australia, Germany, Italy, New Zealand and the United Kingdom) of which two supported by carbon tax (Finland and Norway)
Target adjusted as per need for economic growth (Spain)
Conditional targets based on per capita emissions (France and Japan)
Commitment to a set of policies that will stabilize emissions (United States)
Regional targets balanced out by allowing economic growth-adjusted targets of some countries to be offset by the more aggressive targets of other countries (European Community)
Targets not specified but implicit in membership in European Community or European Free Trade Association (EFTA) (Belgium, Greece, Iceland, Ireland and Portugal) of which one supported by carbon tax (Sweden).

Source: International Energy Agency, *Climate Change Policy Initiatives* (Paris, OECD, 1992), p. 23.

Table XI.5.
ESTIMATED ENERGY-RELATED CO_2, EMISSIONS IN OECD COUNTRIES,[a] 1990 AND 1995

Country	Millions of tons of carbon		Percentage change in carbon emissions between 1995 and 1990
	1990	1995	
Australia	77.0	83.6	8.6
Austria	15.5	15.3	-1.0
Belgium and Luxembourg	35.3	37.5	6.3
Canada	124.0	130.5	5.3
Denmark	14.0	17.5	24.5
Finland	13.9	14.3	3.0
France	108.3	105.0	-3.1
Germany	268.6	248.1	-7.6
Greece	21.1	23.2	10.2
Iceland	0.7	0.8	12.1
Ireland	6.7	8.1	21.9
Italy	116.0	115.5	-0.5
Japan	310.0	345.5	11.5
Netherlands	55.1	60.8	10.4
New Zealand	8.0	8.1	1.5
Norway	8.4	8.8	5.3
Portugal	10.1	14.9	48.1
Spain	64.1	71.1	10.9
Sweden	14.6	17.0	16.0
Switzerland	11.9	11.2	-5.5
Turkey	43.4	50.4	16.3
United Kingdom	163.8	155.7	-5.0
United States	1 429.3	1 510.2	5.7
Total OECD	2 919.7	3 053.3	4.6

Source: United Nations, based on fossil fuel data from *BP Statistical Review of World Energy 1997* (England, United Kingdom, Group Media and Publications, British Petroleum Company, P. L. C. (Public Limited Company), 1991) and *BP Statistical Review of World Energy 1996* (England, United Kingdom, Group Media and Publications, British Petroleum Company, P. L. C. (Public Limited Company), 1996).

[a] Not including countries that joined OECD after 1990.

tions than on clean-up technologies.[25] Constraints on carbon dioxide emissions are essentially constraints on the use of fossil fuels. Source reductions therefore imply reductions in the use of the least expensive and most widely available energy supplies (in other words, fossil fuels). To this end, without help from developed countries in transferring renewable energy technologies and in facilitating improvements in energy efficiency, it is not likely that developing countries, especially the poor ones, will be able to slow their CO_2 emissions without incurring economic penalties.

Technology

As stated in the report of the Secretary-General[26] to the Commission on Sustainable Development at its fifth session on global change and sustainable

[25] Terry Barker, Paul Ekins and Nick Johnstone, eds., *Global Warming and Energy Demand* (London and New York, Routledge, 1995), p. 6.

[26] Document E/CN.17/1997/3 and Corr. 1.

development: critical trends: "Technologies enable humans to expand their range of activities and transform the Earth's resources. Technological advances, in principle, enable more productive use of resources, thereby delivering equivalent or improved services while greatly reducing health and environmental burdens. Two long-term trends offer particular hope for mitigation of these adverse impacts: improvements in energy and material efficiency and decarbonization of energy sources" (para. 55).

Considerable reductions in CO_2 emissions from the global energy supply system are technically achievable using a range of low-polluting technologies.[27] In the short term, the main options include more efficient conversion of fossil fuels and a switch from coal to fuels lower in carbon per unit of output (that is to say, natural gas), and in the medium-to-longer term, the main option would be renewable energy technologies (primarily solar energy, biomass, geothermal energy, hydropower and wind). Other options to reduce CO_2 emissions from the energy supply system include decarbonization, which entails CO_2 removal from fossil fuel power station stack gases, but this option reduces the conversion efficiency and increases the cost of electricity generation. Decarbonization also encompasses removal of carbon before the fuel is burnt for power generation. This approach is less costly and involves smaller loss of conversion efficiency. The only other important option would be switching to nuclear energy. In some cases, such options can be mutually reinforcing.

The options selected by individual countries to reduce emissions depend upon their existing energy systems, natural resources, energy needs, technology options, and policies towards nuclear power and hydroelectricity. Substitution of low carbon content fuels for high carbon content ones is a key option with respect to reducing carbon emissions, particularly from power plants. Electricity generation worldwide currently accounts for approximately one third of global fossil fuel consumption and half of coal consumption. Switching from coal to natural gas will certainly result in substantial reduction in the emissions of CO_2 and other pollutants.

Moreover, the wide variations in energy-related carbon emissions intensity (see table XI.1) indicate that there is enormous scope for improving the efficiency of the energy system and for substituting low carbon content or carbon-free fuels for high carbon content ones. The scope of reducing the intensity of carbon emissions can be many orders of magnitude. For example, carbon emissions intensity is less than 100 kilograms (kg) of carbon per $1,000 of GNP in France and Japan, but higher than 1,000 kg of carbon per $1,000 of GNP in China, the Russian Federation, and Ukraine.

Similarly, the wide variation in energy intensity between countries indicates that there is a large potential for improving end-use energy efficiency. Studies show differences of 20-25 per cent between actual energy consumption and the level of energy consumption that could be achieved from more efficient technologies in the areas of lighting, transportation, buildings, refrigeration, cooking, space heating and air-conditioning.[28]

Many methods have been developed for improving energy efficiency in transportation and industry, and in buildings and appliances, with substantial energy savings. Technology now commercially available can reduce energy consumption in these sectors by up to 50 per cent. A range of renewable energy technologies is being developed that could be competitive with fossil fuel energy

27 For details about technological options available to limit CO_2 emissions, the reader is referred to T. B. Johansson and others, "Options for reducing CO_2 emissions from the energy supply sector", *Energy Policy*, vol. 24, Nos. 10/11 (1996) pp. 985-1,003.

28 Robin W. Bates and Edwin A. Moore, *Commercial Energy Efficiency and the Environment*, World Bank Working Papers Series, No. 972 (Washington, D.C., World Bank, September 1992), p. 3. For details about the potential of energy efficiency improvement the reader is referred to Ernst Worrell and others, *Potentials and Policy Implications of Energy and Material Efficiency Improvement* (United Nations publication, Sales No. E.97.II.A.3).

sources within the next decade or so. These include geothermal, wind, solar, photovoltaic, alcohol fuels and biomass.

The potential of renewable energy technologies to meet a larger share of global energy needs is considerable. Technologies based on solar energy such as photovoltaic and solar-thermal schemes for power generation, wind, biomass, and geothermal energy are continuing to improve rapidly and their production costs are declining.[29] With more research and development, their prospects will further improve over the coming decades. Taking environmental costs into account will make these options more economic even at the present time. The installation of these alternative technologies, which can be used in small- or large- scale operations, entails a short lead time and (except for biomass) they require small land areas. On average, the earth receives annually about 10,000 times as much energy as the world's total energy consumption, or 10 times the energy contained in all fossil fuels and uranium reserves combined. It has been estimated that developing countries can meet all their energy needs with solar energy, using a land area equivalent to only 5 per cent or less of that now being used for agriculture.[30]

Policies for abating CO_2 emissions

The two main instruments for controlling greenhouse gas emissions are regulatory instruments and market-based economic instruments.[31] The first approach, which encompasses environmental laws and regulations, could be very effective in reducing emissions by setting up energy efficiency standards for cars, buildings and consumer appliances. It is, however, difficult to develop and administer. The market-based approach involves mainly three mechanisms: *(a)* external offsets, *(b)* tradable emissions permits and *(c)* carbon taxes.[32]

Under an external offset mechanism, a country could meet an agreed national emissions target by financing the abatement of emissions in other countries. External offsets are created by investing either in the reduction of emissions in other countries or in greenhouse gas "sink enhancements", such as reforestation. However, monitoring of external offsets is very difficult, as it requires measurements and monitoring procedures that cannot be installed easily in countries with different levels of development and different bureaucracies.[33]

Tradable emissions permits require the establishment of an overall emissions limit (in other words, an agreeable target). Once such a target has been identified, emissions permits not exceeding the total target are allocated to each participating member. The idea of using tradable emissions permits as a tool to combat global warming has gained widespread acceptance, particularly following the publication by the United Nations Conference on Trade and Development (UNCTAD) of a study on a global system of tradable carbon emission entitlement.[34] The study argued that tradable emissions permits were not only efficient means of controlling CO_2 emissions but also effective mechanisms for transferring financial resources to developing countries and to countries in transition so as to enable them to participate in the global effort to abate emissions of greenhouse gases. Tradable permits have also been cited as an effective vehicle for international technology transfer. Unlike carbon taxes with their indirect influence on emissions through higher energy prices, tradable permits allow control over the amounts of emissions. They are also less

29 See, for example, K. Ahmed, and D. Anderson, "Where we stand with renewable energy", *Finance & Development*, June 1993; and *Renewable Energy: Sources for Fuels and Electricity*, Thomas B. Johansson and others, eds. (Washington, D.C., and Covelo, California, Island Press, 1993), revised 1996.

30 Dennis Anderson, "Energy and the environment: technical and economic possibilities", *Finance & Development*, June 1996, p. 12.

31 For a description of market-based instruments for emissions control, the reader is referred to Frederico Neto, *Market-based Mechanisms for Controlling Global Emissions of Greenhouse Gases: Possible Reference Bases for International Agreements* (ST/ESA/1994/WP.4), Department for Economic and Social Information and Policy Analysis of the United Nations Secretariat, Working Paper Series, No. 4 (1994).

32 For more details about these abatement mechanisms, refer to United Nations Conference on Trade and Development, *Combating Global Warming: Study on a Global System of Tradeable Carbon Emission Entitlements* (UNCTAD/RDP/DFP/1), (New York, 1992).

33 J. C. Hourcade and R. Baron, "Tradeable permits", in *International Economic Instruments and Climate Change* (Paris, OECD, 1993), pp. 11-42.

34 United Nations Conference on Trade and Development, *Combating Global Warming: Study on a Global System of Tradeable Carbon Emission Entitlements* (UNCTAD/RDP/DFP/1) (New York, 1992).

controversial than carbon taxes. Based on recent experience in the United States to reduce sulfur dioxide emissions to half their 1980 level by the year 2000, tradable permits have proved to be efficient mechanisms for controlling emissions at low cost.[35]

While external offsets and tradable permits figure prominently in proposed economic policy responses to climate change, studies and analyses of their impacts on efficiency, equity and economic growth are of recent origin and still largely in progress. To date, the most widely used market-based mechanism to reduce emissions from the use of fossil fuels is the imposition of carbon taxes. So far, such taxes have been confined largely to developed countries. A cost-benefit analysis for a number of developing countries suggested that countries with low or non-existent energy taxes can receive substantial net gains from a carbon tax, not only in efficiency terms but also in terms of local environmental considerations.[36] However, because taxes can distort production, investment and consumption, the economic costs of imposing carbon taxes can adversely affect GDP growth.[37]

A number of studies on CO_2 emissions abatements have suggested that, while early reductions in emissions can be less costly, significant emissions cuts at later stages would require excessive taxes.[38] Taxes required to reduce emissions in the United States by 45 per cent from the 1990 level by the year 2020 could range from $200 to $350 per metric ton of carbon. This compares with present energy taxes of approximately $30 per ton. Such a carbon tax is equivalent to an addition of about 50 cents-$1 per gallon of gasoline in current dollars. While energy taxes remain difficult to adopt, a new, more promising energy policy option, "ecological tax reform", in which taxation on fossil fuels is offset by reduced taxes on, for example, labour, is now being considered in a number of developed countries.

In many developing countries, energy prices are barely high enough to cover the present costs of production. It is highly unlikely, for domestic political reasons, that these Governments would be prepared to raise energy prices high enough to reduce carbon emissions significantly. Even among OECD countries, many are unlikely to impose the type of taxes, regulations, and price increases that would be required to limit their already high levels of consumption. It will therefore be necessary to introduce other complementary policies aimed at improving efficiency and reducing emissions, such as the elimination of subsidies for electricity and transport and for coal production and the introduction of economic incentives, laws and regulations with respect to use of low-polluting fuels and implementation of efficiency standards for automobiles, buildings and electrical appliances.

As international efforts to deal with climate change move from negotiations towards actions, any proposal must contain structures and procedures that harmonize short and long-term interests and must be economically justified and reasonable enough to persuade countries to ratify it. However, if countries are either unwilling or unable to agree on any universal, legally binding drastic measures to curb CO_2 emissions, what are the alternatives? As in the past, the world will have to turn to technology to cushion the growth in the demand for energy without incurring economic loss. However, Governments might have to create an economic, social and commercial climate in which technology can thrive. Shifting the trend in the demand for energy through use of new technology would imply that countries were consuming less energy and producing less pollution for a given level of economic output and energy prices.

35 Frederico Neto, *Market-based Mechanics for Controlling Global Emissions of Greenhouse Gases: Possible Reference Bases for International Agreements* (ST/ESA/1994/WP.4), Department for Economic and Social Information and Policy Analysis of the United Nations Secretariat, Working Paper Series, No. 4 (1994), p. 7.

36 Anwar Shah and Bjorn Larsen, *Carbon Taxes, the Greenhouse Effect, and Developing Countries*, background paper for *World Development Report, 1992* (Washington D.C., World Bank, 1992).

37 See, for example, Jean-Mark Burniaux and others, *The Costs of Reducing CO2 Emissions: Evidence from GREEN*, OECD Economics Department Working Papers, No. 115 (Paris, OECD, 1992), p. 39.

38 OECD, *The Costs of Cutting Carbon Emissions: Results from Global Models* (Paris, OECD, 1993).

CONCLUSIONS

The scenarios presented in this chapter indicate that, without international cooperation, the CO_2 problem will remain with us because the consumption of energy, which is a vital prerequisite of economic growth and development, will inevitably increase. Although some "decoupling" between energy consumption and economic growth will continue to occur, particularly in more developed countries, an increase in energy consumption in the developing countries will be an inevitable concomitant of rising income and population. This will result in a steady increase in carbon emissions. Efforts to abate global climate change arising from energy activities must also focus on the technological options for limiting the growth of CO_2 emissions. Of all the options and opportunities available, the reliance on more energy-efficient technology and the use of more low-carbon and carbon-free energy sources offer the largest potential.

Policies to improve energy efficiency should be a high priority with regard to attenuating the harmful effects to the environment from rising energy consumption. In the developed countries, technologies and measures aimed at addressing the environmental problems arising from energy consumption are either already available or at various stages of development. Improving the efficiency with which energy is used will not stop the growth of energy demand, but it could help limit the demand to about half of what it would be in the absence of efficiency improvements.

Overall, these changes are unlikely to be sufficient. They will have to be accompanied by policies, including both economic and regulatory instruments, to promote high energy efficiency and environmental standards for cars, residential and commercial buildings, and industry, as well as the electricity sector. Such instruments, some of which have been used for environmental and energy security purposes in a number of OECD countries, include:

- Internalization of environmental costs in the prices of services and products;
- Abolition of subsidies for fossil fuels production and use;
- Provision of incentives to promote less polluting energy sources, such as renewable energy;
- Introduction of polluter pays policies;
- Promotion of education and public information campaigns to raise environmental awareness.

In the negotiations to take place in Kyoto later this year, all countries will have to accept the fact that the burden of safeguarding the environment must be shared equitably. However, the developed countries can assume an indispensable role in facilitating improvements in energy efficiency in the less developed countries.

ANNEX

STATISTICAL TABLES

ANNEX
STATISTICAL TABLES

The present annex contains the main sets of data on which the analysis provided in the *World Economic and Social Survey, 1997* is based. The data are presented in greater detail than in the text and for longer time periods, and incorporate information available as of 30 April 1997.

The annex, like the *Survey* itself, was prepared by the Macroeconomics Division of the United Nations Secretariat. The annex is based on information obtained from the United Nations Statistics Division and the Population Division of the United Nations Secretariat, as well as from the United Nations regional commissions, the International Monetary Fund (IMF), the World Bank, the Organisation for Economic Cooperation and Development (OECD), the United Nations Conference on Trade and Development (UNCTAD) and national and private sources. Estimates for the most recent years were made by the Macroeconomics Division in consultation with the regional commissions.

Forecasts are based on the results of the March-April 1997 forecasting exercise of Project LINK, an international collaborative research group for econometric modelling, which has a headquarters in the Macroeconomics Division. The LINK itself is a global model that links together the trade and financial relations of 79 country or regional models that are managed by over 40 national institutions and by the Division. The models assume that the existing or officially announced macroeconomic policies as of 15 April are in effect. The primary linkages are merchandise trade and prices, as well as interest and exchange rates of major currency countries. The model generates a consistent solution by an iterative process, and thus key exchange rates, interest rates and a complete matrix of trade flows and price changes are determined endogenously. The one significant exception is the international price of crude oil, which is derived with the help of a satellite model of the oil sector. In this case, the average price of the basket of seven crude oils of the Organization of the Petroleum Exporting Countries (OPEC) was seen to fall by 9 per cent in 1997 and assumed to remain unchanged in 1998.

COUNTRY CLASSIFICATION

For analytical purposes, the *World Economic and Social Survey* groups all the countries of the world into one of three mutually exclusive categories: developed economies, economies in transition and developing countries. The composition of these groupings is specified in the explanatory notes that appear at the beginning of the *Survey*. The groupings are meant to reflect basic economic conditions in each region or subregion. Several countries have characteristics that could place them in more than one grouping (in particular, transition economies), but for purposes of analysis the groupings were made mutually exclusive. The groupings do not reflect a judgement of the stage of development of individual countries. Different groupings of countries may be deemed appropriate at different times and for different analytical purposes. Indeed, groupings have been revised for the current *Survey*.

The nature of each of the three main analytical groupings remains unchanged and may be given in broad strokes. The developed economies have the highest material standards of living, although they may contain significant pockets of deep poverty. Production is heavily and increasingly oriented towards the provision of a wide range of often sophisticated services; agriculture is typically a very small share of output. On average, workers in developed countries are the world's most productive, frequently relying on advanced production techniques and equipment. The developed economies are often global centres for research in science and technology. Internationally, the Governments of developed countries are likely to offer assistance to other countries and they do not generally seek foreign assistance.

The developed economies are subdivided for analytical purposes into two sub-groups: one is that of the major industrialized countries (the Group of Seven), which comprises the seven largest economies measured in terms of gross domestic product (GDP), namely, Canada, France, Germany, Italy, Japan, the United Kingdom of Great Britain and Northern Ireland and the United States of America; the second sub-group is "other developed economies". Data on the European Union (EU) cover the 15 current members of the EU for all years.

The transition economies are characterized by the great social transformation that they began at the end of the 1980s, when they fully turned away from central direction as the main concept of economic organization towards the re-establishment of market economies. The shock to their economies was severe, entailing a substantial decline in output and deterioration in social and economic conditions. Some of these economies began the transition process having many of the characteristics of developed economies and some had – and still retain – several characteristics of developing economies; but while a case might be made for grouping individual transition economies with the developed or developing countries, for purposes of analysis within this *Survey* at this time their central characteristic is taken to be their transitional nature.

The group of economies in transition is divided into three sub-groups: one is Central and Eastern Europe, also called Eastern Europe for short, which comprises Albania, Bulgaria, the Czech Republic, Hungary, Poland, Romania, Slovakia and the successor States of the Socialist Federal Republic of Yugoslavia (namely, Bosnia and Herzegovina, Croatia, Slovenia, the former Yugoslav Republic of Macedonia and Yugoslavia); a second group comprises members of

the Commonwealth of Independent States (CIS); and the third encompasses the Baltic States (Estonia, Latvia and Lithuania). In some cases, data are shown for the former Soviet Union until 1991 and for the aggregate of its successor States from 1992, so as to facilitate analysis of trends over time. Data for individual successor States of the Soviet Union will be included in the annex as they become available.

The rest of the world is grouped together as the developing economies. It is a heterogeneous grouping, although with certain common characteristics. Average standards of living in developing countries are lower than in developed countries and many of the countries have deep and extensive poverty. In addition, developing countries are usually importers rather than developers of innovations in science and technology and of their application in new products and production processes. They also tend to be relatively more vulnerable to economic shocks. Even the economies that grow rapidly over a considerable sequence of years are usually perceived as somewhat less resilient and sturdy than developed economies; for example, developing countries are usually perceived as higher-risk placements of international investment funds than developed economies. That the developing economies that do not experience significant economic growth are fragile in nature goes without saying.

Given the size and geographical spread of the grouping of developing economies, there is a natural interest in the performance of geographical subgroupings. The *Survey* has adopted the designation of standard geographical regions, based upon the classification used by the Population Division and the Statistics Division. The following are thus defined as developing-country regions: Africa, Latin America and the Caribbean, Asia and the Pacific (comprising Western Asia, China and Eastern and Southern Asia, including the Pacific islands).

Other distinctions are also made for analytical purposes. The distinction between fuel importers and exporters remains a useful one. The ability to export fuel or the need to import fuel has a large effect on the capacity to import – and on growth of output, as growth in developing countries is often constrained by the availability of foreign exchange. Thus, the developing countries have been divided into fuel exporters and importers. The fuels in question include oil, natural gas, coal and lignite, but exclude hydro- and nuclear electricity. Only fuels are considered, rather than energy sources more broadly, because fuel prices are more directly linked to oil prices and oil prices are particularly volatile and have a considerable impact on incomes and the purchasing power of exports of the countries in question.

A country has been defined as a fuel exporter if, simultaneously:

a Its domestic production of primary commercial fuel (oil, natural gas, coal and lignite) exceeded domestic consumption by at least 20 per cent;

b Its values of fuel exports were equivalent to at least 20 per cent of total exports;

c It was not also classified as a least developed country.

The revised list of fuel-exporting countries comprises Algeria, Angola, Bahrain, Bolivia, Brunei Darussalam, Cameroon, Colombia, the Congo, Ecuador, Egypt, Gabon, Indonesia, the Islamic Republic of Iran, Iraq, Kuwait, the Libyan Arab Jamahiriya, Mexico, Nigeria, Oman, Qatar, Saudi Arabia, the Syrian Arab Republic, Trinidad and Tobago, the United Arab Emirates,

Venezuela and Viet Nam. All other developing countries are classified as fuel importing countries.

Two sub-groups of the fuel-importing developing countries are sometimes identified in the tables of the *Survey*. One is a group of four exporters of manufactures, namely, the four Asian economies considered to constitute the first generation of successful exporters of manufactures (Hong Kong, the Republic of Korea, Singapore and Taiwan Province of China).

The other sub-grouping is the least developed countries. Unlike the preceding groupings, which were created by the Secretariat for the convenience of economic and social analysis, the countries included in the list of least developed countries are decided by the General Assembly, on the basis of the recommendations of the Committee for Development Planning, which reviews criteria for identifying the least developed countries and considers the classification of individual cases. In its most recent resolution on the matter (Assembly resolution 49/133 of 19 December 1994), the Assembly added Angola and Eritrea to the list and graduated Botswana from it. Thus, there are at present 48 countries on that list.[1] The basic criteria for a country's inclusion in the list pertain to its being below certain thresholds with regard to per capita GDP, an economic diversification index and an "augmented physical quality of life index".[2]

For many years, the *Survey* had also made use of a classification of countries arranged according to whether a country was an exporter of financial capital (capital-surplus) or net importer of financial capital (capital-importing). The groupings were based on the experience of the 1970s when the petroleum exporters became a major source of financial capital after the oil price hikes. Indeed, all countries in the capital-surplus grouping were major oil exporters. Yet, a country's status as regards whether it was actually importing or exporting capital fluctuated from year to year. For example, the Islamic Republic of Iran and Iraq became capital-importers when they fought a war during the 1980s and Kuwait and Saudi Arabia became capital-importing countries in the 1990s as a result of the Gulf war.

Starting with the 1997 *Survey*, a new but related distinction between countries will substitute for the capital-surplus/capital-importing one. The new dichotomy is based on the net foreign asset position of each country at the end of 1995, as assessed by IMF in the *World Economic Outlook, October 1996*.[3] The net foreign asset position is a stock that is unlikely to change from positive to negative (or vice versa) from one year to the next and thus whether a country is importing or exporting capital in any particular year becomes less relevant to the criterion. Indeed, the designations "capital-importing" and "capital-surplus" are not appropriate to the new groupings, as they refer to flows. The 1997 *Survey* will therefore adopt the IMF designations for countries, namely "net-creditor" and "net-debtor". The list of net-creditor countries comprises Brunei Darussalam,[4] Kuwait, the Libyan Arab Jamahiriya, Oman, Qatar, Saudi Arabia, Singapore, Taiwan Province of China and the United Arab Emirates.

Finally, one sub-grouping of the net-debtor countries is sometimes employed. This is "sub-Saharan Africa", which groups together all the African countries south of the Sahara desert, excluding Nigeria and South Africa. The intent in this grouping is to focus on the smaller African economies; moreover, the data of the latter two countries would overwhelm the data of the smaller economies in the aggregate and give a distorted picture of the region in terms

1 Afghanistan, Angola, Bangladesh, Benin, Bhutan, Burkina Faso, Burundi, Cambodia, Cape Verde, Central African Republic, Chad, Comoros, Djibouti, Equatorial Guinea, Eritrea, Ethiopia, Gambia, Guinea, Guinea-Bissau, Haiti, Kiribati, Lao People's Democratic Republic, Lesotho, Liberia, Madagascar, Malawi, Maldives, Mali, Mauritania, Mozambique, Myanmar, Nepal, Niger, Rwanda, Samoa, Sao Tome and Principe, Sierra Leone, Solomon Islands, Somalia, Sudan, Togo, Tuvalu, Uganda, United Republic of Tanzania, Vanuatu, Yemen, Zaire and Zambia.

2 Report of the Committee for Development Planning on its twenty-ninth session (*Official Records of the Economic and Social Council, 1994*, Supplement No. 2) (E/1994/22)), chap. V.

3 Washington, D.C., IMF, 1996.

4 Brunei Darussalam is not in the IMF sample, although based on other information it is also a net creditor country.

of GDP, population, international trade and so forth. This is also a grouping employed by IMF in its World Economic Outlook.

DATA QUALITY

There is a growing demand from both the public and the private sector for timely and reliable statistics that can be used for economic and social analysis and decision-making in the present environment of rapid internationalization and information dissemination. Statistical information that is consistent and comparable across time and countries is of vital importance when monitoring structural adjustment, discussing welfare, environmental policy and poverty, or assessing emerging markets and economies. In addition, the multifaceted nature of these and other current issues, such as the high mobility of capital and people, and economic regionalization, call for an integrated as well as a selective approach to national and international data.

At the level of establishing international norms for definition and presentation of data, the 1993 revision of the System of National Accounts (SNA)[5] and the latest edition of the IMF *Balance of Payments Manual*[6] (the IMF Manual) highlight the changes within the economic and social context underlying statistical data during the past two decades, and constitute a major step forward in efforts to incorporate those changes into an integrated and harmonized system of statistics. The 1993 SNA strives to have concepts, definitions and classifications that are interrelated at both the macro- and microlevels. Concepts in the IMF Manual have been harmonized, as closely as possible, with those of the 1993 SNA and with the Fund's methodologies pertaining to money and banking and government finance statistics. In addition, through a system of satellite accounts, which are semi-integrated with the central framework of the SNA, it is possible to establish linkages between national accounts data and other particular fields of economic and social statistics, such as the environment, health, social protection and tourism. The fact that the experts have failed to agree on a set of standards to define formal and informal activities, consumer and producer subsidies, education and other aspects of investment in human capital shows the methodological and material limits to capturing and quantifying all occurrences and changes. However, both the 1993 SNA and the IMF Manual will serve as guideposts for countries that wish to update, review or improve their statistical reporting.

As Governments begin to report their data on the basis of these standards, those data will be incorporated into the statistics in this annex. For the time being, however, the reader should be aware of the deep-rooted weaknesses underlying some of the national and international statistics that are perforce used in this *Survey* and other international publications. Inconsistency of coverage, definitions and data-collection methods among reporting countries sometimes mars the easy interpretation of data published by international agencies.

Another perennial problem entails late or incomplete data or non-reporting of data. Although adjustments and estimations are possible and are made in selected cases, in an era where economic and social indicators are closely tracked and extensively used, there is a need for timely reporting not only on an annual basis, but also on a quarterly or even more frequent basis, where applicable. It is worth noting, in this regard, the considerable progress made

5 Commission of the European Communities, IMF, OECD, United Nations and World Bank, *System of National Accounts, 1993* (United Nations publication, Sales No. E.94.XVII.4).

6 IMF, *Balance of Payments Manual*, 5th ed. (Washington, D.C., IMF, 1993).

by some developing and transition economies in publishing annual and quarterly data on a timely and regular basis, whereas major lacunae have developed in the case of other economies in transition, in conflict or at war.

On the one hand, a widespread source of inaccuracy involves the use of out-of-date benchmark surveys and censuses or old models and assumptions about behaviour and conditions that no longer apply. On the other hand, when statistical administrations seek to improve their estimates by using new sources of data, updated surveys and input-output tables in a sporadic fashion, there can be frequent breaks in the series. National income estimates are especially affected, being subject to significant revisions of the order of 10-30 per cent.[7]

National accounts and related indicators mainly record market transactions conducted through monetary exchange. Barter, production by households, subsistence output and informal sector activities are not always recorded; but together the omitted items can constitute a large share of total activity and lead to an underestimation of production of up to 40 per cent of national output. As the degree of underestimation varies across countries, output comparisons may give faulty results. In addition, as the non-market sector is absorbed into the mainstream of production over time through increasing monetization, the extent of output growth will be overstated based on the extent of this shift (see "Data definitions and conventions" below for illustrations of difficulties of the type noted here).

It is no exaggeration to say that weaknesses at the national level become major analytical handicaps when comparisons are made between countries or groupings of countries at a given time or over a period of time. Missing, unreliable or incompatible country data necessitate considerable estimation and substitution on the part of international organizations if they are to retain consistent country composition of aggregated data over time. Furthermore, the absence of reliable GDP estimates for many developing countries and the transition economies requires that analysts resort to very approximate estimates in preparing country aggregations, as GDP weights underlie many data series.

Besides the problems with GDP, there are serious problems with other types of statistics, such as unemployment, consumer price inflation and the volume of exports and imports, that are commonly cited. Cross-country comparisons of unemployment must be made with caution owing to differences in definition among countries. For this reason in particular, table A.6 employs the standardized definitions of unemployment rates which, in certain cases, differ substantially from national definitions.

Consumer price indices are among the oldest of the economic data series collected by Governments, but they are still surrounded by controversy even in countries with the most advanced statistical systems, owing in particular to changes in the quality of goods and consumer behaviour that are often not captured because of infrequent consumer spending surveys and revisions to sample baskets of commodities.

There are no clear-cut solutions to many of the problems noted above, and even when there are, inadequate resources allocated to the improvement of statistical systems and reporting can perpetuate statistical shortcomings. In this light, it is advisable to approach economic and social indicators as presented in this *Survey* as approximations and estimations, especially at the aggregate level.

7 Wilfred Beckerman, "National income", in *The New Palgrave: The World of Economics*, John Eatwell, Murray Milgate and Peter Newman, eds. (New York, The Macmillan Press, Limited, 1991), p. 486.

DATA DEFINITIONS AND CONVENTIONS

Aggregate data are either sums or weighted averages of individual country data. Unless otherwise indicated, multi-year averages of growth rates are expressed as compound annual rates of change. The convention followed is to identify the *period of change* in a multi-year growth rate and omit the base year; for example, the 10-year average growth rate of a variable in the 1980s would be identified as the average annual growth rate in 1981-1990. Year-to-year growth rates are expressed as annual percentage changes.

Historical data presented in the statistical annex may differ from those in previous editions because of updating, as well as changes in the availability of data for individual countries.

Output

The growth of output in each group of countries is calculated from the sum of GDP of individual countries measured at 1993 prices and exchange rates. That is to say, national currency data for GDP in 1993 were converted into dollars (with adjustments in selected cases)[8] and were extended forward and backwards in time using changes in "real" GDP for each country. The method is believed to supply a reasonable set of aggregate growth rates for a period of about 15 years, centred on 1993. In other words, the base year has to be moved from time to time to reflect the changed composition of production and expenditure over long periods. Indeed, this is the first edition of the *Survey* to use the 1993 base year (the previous base year was 1988).

National data on "real GDP" are aggregated to create regional output figures and thus national practices are followed in defining real GDP for each country. It would be fortuitous if individual countries also chose 1993 as the base year for their accounts, but in general they have not.

In the case of the United States, the base year itself has now a very different meaning. That is to say, United States GDP data have recently been recalculated in terms of a "chain-weighted" index. Instead of estimating the GDP for several years in the prices of the base year and then calculating the growth rate between years from these estimates, the growth rate of real GDP in the United States for any year is now the average of the GDP growth calculated in the prices of that year and the growth rate calculated in the prices of the previous year. A series of "real GDP" of the United States is then calculated by applying these growth rates to the dollar value of GDP in the base year, which is currently 1992.[9]

Developed economies

Up to and including the *World Economic Survey, 1992*,[10] the *Surveys*, in order to be as current as possible, published either GDP or gross national product (GNP) data (depending on which data series was released first) as indicators of economic activity in developed market economies. However, because of the improved availability of GDP data, as of the *World Economic Survey, 1993*,[11] the *Survey* has used GDP as its measure of aggregate output for all countries.

Beginning in 1991, aggregate economic growth data for Germany included the former German Democratic Republic. Because official data for the level of GDP in post-reunification Germany began with 1991, the first year for which a

8 When individual exchange rates seem outside the bounds of "realism", alternative exchange rates are substituted. Averages of the exchange rates in relevant years might be used, or the exchange rate of a more normal year might be adjusted according to relative inflation rates that have occurred since the time the exchange rate was deemed "correct".

9 See Charles Steindel, "Chain-weighting: the new approach to measuring GDP", *Current Issues in Economics and Finance*, Federal Reserve Bank of New York, December 1995; for details, see United States Department of Commerce, *Survey of Current Business*, January/February 1996, pp. 1-118.

10 United Nations publication, Sales No. E.92.II.C.1 and Corr. 1 and 2.

11 United Nations publication, Sales No. E.93.II.C.1.

growth rate could be calculated from official data was 1992. The growth rate in 1991, as shown in table A.2, was a weighted average of official and estimated GDP growth rates in the two parts of Germany, with the weighting based on the level of GDP in 1991, as published by the Statistisches Bundesamt (Federal Statistical Office) of Germany.

Economies in transition

Starting with the *World Economic Survey, 1992*, there was a switch to GDP from net material product as the measure of aggregate output of economies in transition. For the purpose of arriving at an analytically useful time-series in real and nominal terms, adjustments were made, notably in the case of the former Soviet Union, to the GNP data published in terms of local currency. In many instances, there were neither fully reliable national accounts data nor meaningful exchange rates for the 1980s, and this continued into the 1990s in several cases. Thus, a set of weights had to be estimated from fragmentary data (and a series of approximate growth rates of GDP in constant prices was constructed for the Soviet Union for 1981-1990).

Subsequently, new data became available that warranted updating the estimates of the weighting scheme. In addition, with the shift in base year from 1988 to 1993, it has become possible for the first time to introduce national estimates of GDP into the calculation of base-year GDP values and weights.

In addition to the overall reliability, consistency and comparability of national accounts data which are subject to a general caveat that applies to all countries, the extent of economic activity not captured by national statistics has become an especially acute concern in some transition economies. The proliferation of new modes of production, transactions and entities has rendered the previous institutional and methodological framework for statistics inadequate. This has produced major inconsistencies in officially reported data. A comprehensive reform of national statistical systems has thus been under way in the Russian Federation and in other transition economies. As a result, important revisions to several data series have been released. Further revisions of past and current performance are expected, and it is likely that they will more accurately reflect market economic activity in its totality, in particular its currently unreported components. It therefore bears repeating more than ever that the statistical information provided, especially for many of the successor States of the Soviet Union, as well as for other countries in transition, must be treated as tentative estimates subject to potentially large revision.[12]

Developing countries

Beginning with the *World Economic Survey, 1993*, estimates of the growth of output in developing countries have been based on the data of 93 countries. In conjunction with the exercise to revise country groupings for the present *Survey*, as noted above, the sample of countries whose data constitute the aggregate of the developing countries was also revised. It now includes 95 economies, accounting for an estimated 97 per cent of the 1993 GDP and 98 per cent of the 1993 population of all developing countries and territories. The sample countries account for more than 95 per cent of the GDP and population of each of the geographical regions into which the developing countries are divided, with the exception of sub-Saharan Africa of which the

12 See *World Economic and Social Survey, 1995* (United Nations publication, Sales No. E.95.II.C.1), statistical annex, sect. entitled "Data caveats and conventions".

countries included in the sample make up 90 per cent of the GDP and 93 percent of the population.

It has to be borne in mind that the veracity of estimates of output and of other statistical data of developing countries is related to the stage of development of their statistical systems. As these improve, revisions to the data can be expected. For example, in 1994, Turkey recalculated its GNP going back to 1968 by using new data, such as results of recent surveys, and incorporating some items and economic subsectors that could not be included in previous annual national accounts.[13] In Africa in particular, there is a wide divergence in the values of the economic aggregates provided by different national and international sources for many countries. Data for the countries in Asia and Europe as well as in Africa in which civil strife and war exist should be interpreted as indicating only rough orders of magnitude. In addition, in countries experiencing high rates of inflation and disequilibrium exchange rates, substantial distortions can invade national accounts data. For this reason among others, Argentina revised its 1980s GDP by some 30 per cent.

Alternative aggregation methodologies for calculating world output

The *World Economic and Social Survey* utilizes a weighting scheme derived from exchange-rate conversions of national data in order to aggregate rates of growth of output of individual countries into regional and global totals, as noted above. This is similar to the approach followed in other international reports, such as those of the World Bank. IMF, however, particularly in its World Economic Outlook, now follows a different approach. In May 1993, it adopted a weighting scheme for aggregation in which the country weights are derived from national GDP in "international dollars", as converted from local currency using purchasing power parities (PPPs). OECD followed IMF and adopted the alternate method in December 1993 in its *OECD Economic Outlook*.[14] The question of which approach to use still seems controversial.[15]

The motivation for PPP weights was the belief that when aggregating production in two countries, a common set of prices should be used to value the same activities in both countries, but this is frequently not the case when market exchange rates are used to convert local currency values of GDP. The PPP approach revalues gross production (actually, expenditure) in different countries in a single set of prices. The PPP conversion factor is in principle the number of units of national currency needed to buy goods and services equivalent to what can be bought with one unit of currency of the *numéraire* country, the United States. In principle as well as in practice, however, PPPs are difficult to calculate because goods and services are not always directly comparable across countries, making direct comparisons of their prices correspondingly difficult. This is particularly the case for several services such as health care and education, where it is hard to measure output itself, let alone prices.

One significant problem in employing such PPP estimates for calculating the relative sizes of countries is that the most recently completed set of PPP prices, which was for 1985, covered a set of only 64 countries.[16] Estimates for a new benchmark year (1993) covering a larger set of countries is in an advanced stage of preparation by the International Comparison Programme (ICP), whose activities are coordinated by the United Nations Statistics Division.

This notwithstanding, certain regularities had been observed, on the one

13 State Institute of Statistics, Prime Ministry, Republic of Turkey, *Gross National Product: Concepts, Methods and Sources*, Ankara, State Institute of Statistics, 1994, pp. iii-iv.

14 Paris, OECD, 1993.

15 See *World Economic and Social Survey, 1995...*, statistical annex, sect. entitled "Alternate aggregation methodologies for GDP".

16 See *World Comparisons of Real Gross Domestic Product and Purchasing Power, 1985: Phase V of the International Comparison Programme*, Series F, No. 64 (United Nations publication, Sales No. E.94.XVII.7 and Corr. 1).

hand, between GDP and its major expenditure components when measured in market prices and, on the other, between GDP and its components measured in "international" prices as derived in the ICP exercise. On that basis (and using other, very partial data on consumer prices), a technique was devised to approximate PPP levels of GDP and its major expenditure components for countries that had not participated in ICP, the results having come to be known among economists and statisticians as the Penn World Tables.[17]

Neither the PPP approach nor the exchange-rate approach to weighting country GDP data can be applied in a theoretically pure or fully consistent way. The data requirements for a truly global ICP are enormous, although in each round the ICP coverage grows. Similarly, since a system of weights based on exchange rates presumes a world of foreign exchange markets and domestic economies under competitive and liberal conditions, its application has been constrained by exchange controls and severe distortions of market prices in many countries. Moreover, there are a large number of non-traded goods and services in each country to which the "law of one price" does not apply, even in theory. However, the global trend towards liberalization may make possible a more consistent application over time of the exchange-rate method. Even so, the methods are conceptually different and thus yield different measures of world output growth.

The differences in output growth measures can be seen in table A.1 for the periods 1981-1990 and 1991-1996. The estimates employ the same individual country GDP growth rates data, and data are employed for the same number of countries in both sets of averages. The columns differ only in the weights used to form the averages, which are shown in the table entitled "Output and per capita output in the base year".[18]

Clearly, the world economy has grown faster when country GDPs are valued at PPP conversion factors, although the growth rates for the different groupings of countries are generally not much different when data are converted at PPP rather than at exchange-rate factors. This is easy to explain: the Asian developing countries, which account for a large share of the GDP of the developing countries, are growing more rapidly than the rest of the world and their weight under PPPs is higher than it is under the exchange-rate scheme. The influence of China is particularly important. In 1993, the total GDP of all developing countries excluding China was 2.2 times larger when valued at PPPs rather than at exchange rates, but China's GDP was 4.3 times larger. Thus, the GDP of the developing countries excluding China valued at exchange rates grew between 1991 and 1996 at about the same rate as GDP valued at PPPs, that is, 4.0 per cent versus 4.3 per cent. When China is included, however, the growth rates are 4.9 per cent and 5.8 per cent, respectively.

International trade

The main source of data for tables A.15 and A.16 is the IMF *Direction of Trade Statistics* database, while tables A.17 and A.18 are drawn from the more detailed trade data in the United Nations External Trade Statistics Database (COMTRADE).

Trade values in table A.19 are largely based on customs data for merchandise trade converted into dollars using average annual exchange rates and are mainly

17 See Robert Summers and Alan Heston, "The Penn World Table (Mark 5): an expanded set of international comparisons, 1950-1988", *Quarterly Journal of Economics*, vol. 106, No. 2 (May 1991), pp. 327-368 (current versions of these data are made available through the Internet or on diskette from the National Bureau of Economic Research, Cambridge, Massachusetts, United States of America; Internet address: http://www/nber.org/pwt56.html).

18 The PPP data are preliminary estimates of the Penn World Table.

OUTPUT AND PER CAPITA OUTPUT IN THE BASE YEAR

	GDP (billions of dollars)		GDP per capita (dollars)	
	Exchange rate basis 1993	PPP basis 1993	Exchange rate basis 1993	PPP basis 1993
World	24 301	30 497	4 461	5 598
Developed economies of which:	18 987	17 005	23 213	20 799
United States	6 553	6 553	25 006	25 006
European Union[a]	6 914	6 593	18 724	17 854
Japan	4 275	2 628	34 332	21 105
Economies in transition	682	1 842	1 661	4 488
Developing countries	4 641	11 650	1 100	2 761
By region:				
Latin America	1 405	2 539	3 089	5 582
Africa	429	1 001	656	1 531
Western Asia	713	1 066	3 426	5 118
Eastern and Southern Asia	1 495	4 441	876	2 603
China	599	2 603	501	2 176
By analytical grouping:				
Net creditor countries	506	644	9 483	12 080
Net debtor countries	4 136	11 006	993	2 642
Net fuel exporter countries	1 270	2 697	1 648	3 499
Net fuel importer countries	3 372	8 954	978	2 596
Memo items				
Sub-Saharan Africa	130	337	339	879
Least developed countries	130	569	248	1 075

Source: United Nations.

a The German Democratic Republic is included in western Germany beginning with 1991.

drawn from IMF, *International Financial Statistics*. These data are supplemented by balance-of-payments data in certain cases. Estimates of dollar values of trade for the years up to 1990 in the case of the economies in transition were based on the research undertaken in the Economic Commission for Europe (ECE). Data for the most recent years include estimates by the regional commissions and the Macroeconomics Division.

For developed economies and economies in transition, the growth of trade

volumes are aggregated from national data, as collected by ECE, IMF and the Macroeconomics Division. Implicit unit value indices in table A.20 are calculated from value and volume measures. Terms of trade are defined as the ratio of export to import unit values.

As of 1 January 1993, customs offices at the borders between States members of the European Union (EU), which used to collect and check customs declarations on national exports and imports, were abolished as the Single Market went into effect. A new system of data collection for intra-EU trade, called INTRASTAT, has been put in place. INTRASTAT relies on information collected directly from enterprises and is linked with the system of declarations of value-added tax (VAT) relating to intra-EU trade to allow for quality control of statistical data. There nevertheless remains a discontinuity owing to the changes in methodology.

Concerning the economies in transition, two factors preclude the presentation of estimates for trade values and volumes as other than tentative: first, the switch, which occurred mainly in 1991, from intraregional trade at rather arbitrarily set prices in transferable roubles to trade at world market prices in convertible currency; and second, the inadequacy of the data-collection systems in the region. These largely affect the reliability of calculations of changes in unit values. Nevertheless, we are able to include estimates for Central and Eastern European countries produced by the ECE.

Unit values of exports and imports for groupings of developing countries are estimated in part from weighted averages of export prices of commodity groupings at a combination of three- and four-digit Standard International Trade Classification (SITC) levels, based on COMTRADE (the weights reflect the share of each commodity or commodity group in the value of the region's total exports or imports). Unit value and volume changes for Latin America and the Caribbean are supplied to the Division by the Economic Commission for Latin America and the Caribbean (ECLAC). Estimates for Africa draw in part upon IMF estimates for the World Economic Outlook.

International finance

The *Survey* includes standardized tables on the net transfer of financial resources of developed and developing countries, in addition to those on balance of payments on current account, external debt and particular financial flows. Net transfer is measured in two ways, based on either of two definitions, according to the derivation contained in the *World Economic Survey, 1986: Current Trends and Policies in the World Economy.*[19]

One definition covers the concept of net transfer on an expenditure basis, which can be related in broad terms to the System of National Accounts. This net transfer measure concerns the implicit financing of the balance of trade in goods, services, compensation of employees and transfers related to labour income (largely, workers' remittances). Algebraically, if X represents exports of goods, services, compensation of employees and transfers, and M represents the corresponding import variable, then the net transfer on an expenditure basis is defined as -(X-M). A positive net transfer means that total expenditure in the economy on domestic production and imports exceeds the value of output produced domestically (including net foreign earnings of labour).

19 United Nations publication, Sales No. E.86.II.C.1, annex III.

The second concept is of net transfer on a financial basis, which is defined as net flow of capital minus net payment of interest and dividends. Capital is so defined as to include official grants, private grants (other than workers' remittances), direct investment[20] and all credit flows, including use of IMF resources. This treatment embodies one – but not the only – standard approach to the balance of payments. It incorporates a definition of the current account as the balance of payments on goods, all services and private transfers, and also treats borrowing from IMF as a credit flow, whereas in some other treatments such borrowing is considered part of the change in reserves.

The link between the two definitions of net transfer is net change in reserves, that is to say, net transfer on a financial basis minus net increase in reserves equals net transfer on an expenditure basis. The concept of net transfer on an expenditure basis in effect makes no distinction between reserve changes and other capital flows, lumping them all together as constituting the means of financing the net transfer. The concept of net transfer on a financial basis in effect focuses attention on the composition of the financial flows of all actors except the central bank of the country concerned.

20 Direct investment is defined on an actual cash flow basis, which is consistent with the practice of a large number of developing countries in reporting such data; that is to say, direct investment excludes reinvested earnings and, correspondingly, direct investment income also excludes reinvested earnings.

LIST OF TABLES

I.GLOBAL OUTPUT AND MACROECONOMIC INDICATORS

II.INTERNATIONAL TRADE

III.INTERNATIONAL FINANCE AND FINANCIAL MARKETS

IV. THE INTERNATIONAL OIL MARKET

I. GLOBAL OUTPUT AND MACROECONOMIC INDICATORS

Table A.1.
WORLD POPULATION, OUTPUT AND PER CAPITA GDP, 1980-1996

	Growth of GDP (annual percentage change)				Growth rate of population (annual percentage change)		Population (millions)		GDP per capita	
	Exchange-rate basis (1993 dollars)		PPP basis						Exchange-rate basis (1993 dollars)	
	1981-1990	1991-1996	1981-1990	1991-1996	1981-1990	1991-1996	1980	1996	1980	1996
World	2.8	2.1	3.1	3.3	1.7	1.4	4 384	5 666	4 061	4 655
Developed economies	2.9	1.7	2.8	1.7	0.6	0.3	756	818	18 184	24 855
of which:										
United States	2.9	2.0	2.9	2.0	1.0	0.5	230	262	20 551	27 033
European union (15)[a]	2.3	1.3	2.3	1.3	0.3	0.2	355	369	15 041	20 048
Japan	4.0	1.7	4.0	1.7	0.6	0.1	117	125	23 483	36 066
Economies in transition[b]	1.7	-6.6	2.0	-6.4	0.7	0.1	378	411	2 261	1 552
Developing countries	2.4	4.9	3.8	5.8	2.1	1.8	3 250	4 438	986	1 221
by region:										
Latin America	1.0	3.2	1.3	3.0	2.0	1.7	354	478	3 247	3 213
Africa	1.9	1.6	2.0	2.1	2.9	2.7	455	708	780	663
Western Asia	-2.2	2.0	-0.6	2.6	3.4	2.6	137	224	6 232	3 432
Eastern and Southern Asia	6.6	6.4	5.8	5.9	2.2	1.8	1 306	1 796	510	1 018
China	9.1	11.6	9.1	11.6	1.5	1.1	999	1 232	178	664
by analytical grouping:										
Net-creditor countries	1.5	4.8	1.4	4.6	3.2	1.9	37	56	10 203	10 213
Net-debtor countries	2.5	4.9	4.0	5.9	2.1	1.8	3 214	4 382	880	1 105
Net fuel exporters	-0.7	2.3	1.1	3.3	2.6	2.2	559	821	2 296	1 664
Net fuel importers	4.1	5.9	4.9	6.6	2.0	1.7	2 692	3 618	714	1 121
Memo items:										
Sub-Saharan Africa	1.7	1.0	0.5	2.6	3.0	2.9	262	417	437	345
The least developed countries	2.1	1.8	2.4	3.5	2.6	2.5	379	571	280	255

Source: United Nations.

a Including the eastern *Länder* (States) of Germany from 1991.
b Including the former German Democratic Republic until 1990.

Table A.2.
DEVELOPED ECONOMIES: RATES OF GROWTH OF REAL GDP, 1987-1997

Annual percentage change[a]

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996[b]	1997[c]
All developed economies	3.1	4.4	3.7	2.7	• 0.8	1.6	0.7	2.6	1.9	2.4	2 ½
Major industrialized countries	3.2	4.6	3.7	2.7	• 0.7	1.7	0.8	2.6	1.8	2.4	2 ¼
Canada	4.3	4.9	2.5	-0.2	-1.8	0.8	2.2	4.1	2.3	1.5	3 ½
France	2.3	4.5	4.3	2.5	0.8	1.2	-1.3	2.8	2.2	1.5	2 ¼
Germany	1.4	3.7	3.3	4.7	• 1.2	2.1	-1.1	2.9	1.9	1.4	2 ¼
Italy	3.1	4.1	2.9	2.1	1.3	0.6	-1.2	2.2	2.9	0.7	1 ¼
Japan	4.2	6.2	4.8	5.1	4.0	1.1	0.1	0.5	0.9	3.6	1 ¾
United Kingdom	4.8	5.0	2.2	0.4	-2.0	-0.5	2.1	3.8	2.5	2.6	3 ½
United States	2.9	3.8	3.4	1.3	-1.0	2.7	2.3	3.5	2.0	2.4	2 ½
Other industrialized countries	2.9	3.6	3.7	2.7	0.9	1.0	0.2	2.9	2.6	2.3	2 ½
Memo items:											
Western Europe	2.7	4.0	3.4	2.9	• 0.8	1.0	-0.6	2.8	2.4	1.7	2 ½
European Union (15)	2.7	4.1	3.4	2.9	• 0.7	1.0	-0.6	2.9	2.4	1.7	2 ½

Source: United Nations, based on *IMF, International Financial Statistics.*

• Indicates discontinuity in the series: from 1991, Germany includes eastern *Länder* (States).
a Data for country groups are weighted averages, where weights for each year are GDP valued at 1993 prices and exchange rates.
b Partly estimated.
c Forecast, partly based on Project LINK.

Table A.3.
ECONOMIES IN TRANSITION: RATES OF GROWTH OF REAL GDP, 1987-1997

Annual percentage change[a]

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996[b]	1997[c]
Economies in transition[d]	2.2	3.6	2.0	-6.6	♦ -9.2	-13.6	-9.1	-4.4	-1.4	-0.9	2
Central and Eastern Europe[d]	1.4	1.5	0.6	-10.2	♦-11.2	-9.0	-5.5	3.6	5.3	3.6	3
Albania	-0.8	-1.4	9.8	-13.1	-29.4	-6.0	11.0	9.4	8.6	4.0	-1
Bulgaria	6.1	2.6	-1.4	-9.1	-6.9	-5.7	-3.7	1.8	2.1	-10.0	-5
Former Czechoslovakia	0.8	2.6	1.3	-1.2	-14.2	-6.4					
Czech Republic							-0.9	2.6	4.8	4.2	3 ¼
Slovakia							-4.1	4.8	7.3	6.8	6
Hungary	3.8	2.7	3.8	-3.3	-11.9	-3.0	-0.8	2.9	1.5	1.0	2 ½
Poland	2.0	4.4	0.2	-11.6	-7.0	2.6	3.8	5.2	7.3	5.3	5 ½
Romania	0.8	-0.5	-5.8	-8.2	-12.9	-8.8	-3.0	3.9	7.1	4.1	-3
Yugoslavia	-0.5	-1.5	0.6								
Croatia				-8.5	-20.9	-9.7	-3.7	0.6	1.7	5.0	5 ¾
Slovenia				-4.7	-8.1	-5.4	1.3	5.3	3.9	3.1	4
The former Yugoslav Republic of Macedonia				-10.2	-12.1	-13.4	-14.1	-7.2	-3.0	1.6	4
Federal Republic of Yugoslavia				-8.4	-11.2	-26.2	-27.7	2.5	6.0	4.0	1
Baltic States						-31.8	-14.6	1.5	1.5	3.3	3 ¾
Estonia						-14.8	-7.8	4.0	3.0	4.0	4 ½
Latvia						-34.9	-14.9	0.6	-1.6	2.5	3
Lithuania						-35.0	-17.0	1.0	2.7	3.5	4
Soviet Union	2.8	5.3	3.0	-4.0	-8.0						
Commonwealth of Independent States						-14.8	-11.1	-10.5	-7.2	-5.6	½
Armenia						-52.3	-14.6	5.5	10.3	5.7	7
Azerbaijan						-22.6	-23.1	-21.9	-17.4	1.3	4
Belarus						-9.6	-10.6	-15.8	-16.0	2.6	3
Georgia						-40.3	-39.4	-30.0	2.4	11.0	15
Kazakstan						-13.0	-12.9	-24.6	-8.9	1.1	2
Kyrgyzstan						-15.9	-15.5	-20.1	-6.2	5.6	6 ¼
Republic of Moldova						-29.1	-1.2	-31.2	..	-8.0	4
Russian Federation						-14.5	-8.7	-12.6	-4.0	-6.0	1
Tajikistan						..	-17.3	-21.3	-12.4	-17.0	-4
Turkmenistan						..	..	-20.0	-15.0	0.1	4
Ukraine						-13.7	-14.2	-23.0	-11.8	-10.1	-2 ½
Uzbekistan						-11.1	-2.4	-3.5	..	1.6	3 ¼

Sources: United Nations and ECE.
♦ Indicates discontinuity in the series.
a Country group aggregates are averages weighted by GDP in 1993 dollars (for methodology, see *World Economic Survey, 1992* (United Nations publication, Sales No. E.92.II.C.1 and corrigenda), annex, introductory text.)
b Partly estimated.
c Forecast, based in part on Project LINK.
d Including the former German Democratic Republic until 1990.

Table A.4.
DEVELOPING COUNTRIES: RATES OF GROWTH OF REAL GDP, BY COUNTRY GROUP, 1987-1997

Annual percentage change

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996[a]	1997[b]
All developing countries[c]	4.3	3.8	3.2	2.2	3.3	5.1	5.2	5.6	4.6	5.7	6
By region:											
Latin America	2.9	0.3	0.7	0.0	3.6	3.0	3.6	5.5	-0.1	3.7	4 ¼
Africa	0.9	2.9	2.7	1.5	0.7	-0.2	-0.4	2.1	2.8	4.3	4
Western Asia	-0.1	-0.3	2.4	-1.9	-4.9	5.5	4.1	-0.9	3.5	5.0	5 ¾
Eastern and Southern Asia	8.4	8.7	6.6	6.8	6.2	5.6	5.9	7.0	7.3	6.5	6 ¼
China[d]	11.6	11.3	4.1	3.8	9.2	14.2	13.5	12.6	10.5	9.7	10
By analytical grouping:											
Net-creditor countries	4.9	6.4	5.9	4.7	3.9	6.2	5.3	3.6	4.4	5.3	5 ¼
Net-debtor countries	4.3	3.5	2.9	2.0	3.2	5.0	5.2	5.8	4.6	5.8	6
Net fuel exporters	0.3	0.8	-7.7	12.2	-0.5	4.5	2.4	2.3	0.5	4.6	5 ½
Net fuel importers	6.2	5.2	3.3	3.0	4.8	5.3	6.3	6.9	6.0	6.1	6
Memo items:											
Sub-Saharan Africa	0.5	2.9	1.1	0.7	-0.4	-1.2	-2.7	1.5	4.2	4.8	4 ¾
Least developed countries	2.2	3.6	2.1	1.3	-0.5	0.7	-0.8	2.0	4.5	5.0	4 ¾

Source: United Nations.
a Preliminary estimates.
b Forecast, partly based on Project LINK.
c Covering countries that account for 98 per cent of the population of all developing countries.
d Data for 1987-1989 are government estimates.

Table A.5.
DEVELOPED ECONOMIES: INVESTMENT, SAVING AND NET TRANSFERS, 1980-1995
Percentage of GDP

		Gross domestic investment	Gross domestic saving			Net financial transfer
			Total	Government saving	Private saving	
Total[a]	1980	23.4	23.7	0.9	22.8	-0.3
	1985	21.4	21.8	-0.6	22.4	-0.4
	1990	22.2	22.3	1.2	21.1	-0.1
	1991	21.5	21.7	0.6	21.1	-0.2
	1992	20.8	21.2	-0.5	21.7	-0.4
	1993	20.4	21.1	-0.7	21.8	-0.7
	1994	21.4	22.0	0.1	21.9	-0.6
	1995	21.2	21.9	..	..	-0.7
Major industrialized countries[a]	1980	23.2	22.7	0.8	21.9	0.5
	1985	21.4	20.9	-0.8	21.6	0.5
	1990	22.0	22.0	1.1	20.8	-0.0
	1991	21.4	21.5	0.7	20.8	-0.1
	1992	20.8	21.1	-0.4	21.5	-0.3
	1993	20.6	21.1	-0.4	21.5	-0.5
	1994	21.2	21.6	0.4	21.1	-0.4
	1995	21.4	21.7	..	..	-0.4
of which:						
Germany[b]	1980	23.4	22.9	2.4	20.5	0.5
	1985	19.6	23.1	2.6	20.5	-3.5
	1990	21.4	27.3	1.3	26.0	-5.9
	1991	23.4	23.4	1.0	22.4	0.1
	1992	22.9	22.9	1.4	21.5	0.0
	1993	21.5	22.0	0.5	21.5	-0.5
	1994	22.5	23.1	0.9	22.2	-0.6
	1995	22.5	23.4	..	..	-0.8
Japan	1980	32.2	31.3	3.2	28.2	0.9
	1985	28.2	31.5	4.9	26.6	-3.4
	1990	32.3	33.0	8.9	24.1	-0.7
	1991	32.1	33.9	9.3	24.6	-1.8
	1992	30.7	33.1	8.2	24.9	-2.4
	1993	29.7	32.0	6.2	25.7	-2.3
	1994	28.7	30.8	5.8	25.0	-2.1
	1995	28.7	30.1	..	..	-1.5
United States	1980	19.9	19.3	-0.1	19.5	0.6
	1985	20.2	17.2	-2.5	19.7	3.0
	1990	17.2	15.7	-2.0	17.7	1.5
	1991	15.6	15.1	-2.8	17.9	0.5
	1992	15.7	15.0	-3.9	18.9	0.7
	1993	16.5	15.2	-2.9	18.2	1.2
	1994	17.9	16.2	-1.0	17.2	1.7
	1995	18.0	16.3	..	..	1.6

Sources: OECD, *National Accounts*; and national information supplied to the United Nations Statistics Division.
a National data converted to dollars for aggregation at annual average exchange rates.
b Prior to 1991, data refer to Western Germany only.

Table A.6.
DEVELOPED ECONOMIES: UNEMPLOYMENT RATES, 1987-1997[a]

Percentage of total labour force

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996[b]	1997[c]
All developed economies	7.2	6.6	6.1	6.0	6.7	7.4	8.1	7.9	7.6	7.6	7 ½
Major industrialized countries	6.7	6.1	5.7	5.6	6.2	6.8	7.2	7.1	6.7	6.8	6 ¾
Canada	8.8	7.7	7.5	8.1	10.2	11.3	11.2	10.4	9.5	9.7	9 ½
France	10.4	9.8	9.3	9.0	9.5	10.4	11.7	12.3	11.6	12.3	12 ½
Germany[d]	6.2	6.2	5.6	4.9	4.2	4.6	7.9	8.4	8.2	9.0	10
Italy	10.9	11.0	10.9	10.3	9.9	10.5	10.3	11.4	11.9	12.0	12
Japan	2.9	2.5	2.3	2.1	2.1	2.2	2.5	2.9	3.1	3.4	3 ¼
United Kingdom	10.3	8.5	7.1	6.8	8.8	10.1	10.5	9.6	8.8	8.2	8
United States	6.1	5.4	5.2	5.4	6.6	7.3	6.9	6.1	5.6	5.4	5 ¼
Other industrialized countries	9.8	9.3	8.4	8.1	8.9	10.1	12.1	12.2	11.6	11.4	11
Memo items:											
Western Europe	9.7	9.1	8.3	7.7	8.0	8.9	10.7	11.0	10.6	10.8	11
European Union (15)	10.0	9.4	8.5	7.8	8.2	9.1	10.9	11.3	10.9	11.0	11

Source: United Nations, based on data of OECD.

[a] For the 7 countries shown and 10 others, unemployment data are standardized by OECD for comparability among countries and over time, in conformity with the definitions of the International Labour Office (see OECD, *Standardized Unemployment Rates: Sources and Methods* (Paris, 1985)); national definitions and estimates are used for other countries.

[b] Partly estimated.

[c] Forecast.

[d] Prior to January 1993, Western Germany only

Table A.7.
DEVELOPED ECONOMIES: CONSUMER PRICE INFLATION, 1987-1997[a]

Annual percentage change

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997[b]
All developed economies	2.7	3.1	4.3	4.9	4.3	3.2	2.7	2.3	2.3	2.2	2 ½
Major industrialized countries	2.5	2.9	4.2	4.7	4.1	3.0	2.5	2.1	2.2	2.1	2 ½
Canada	4.4	4.0	5.1	4.7	5.6	1.5	1.9	0.2	2.2	1.4	1 ¾
France	3.3	2.8	3.4	3.4	3.2	2.4	2.1	1.7	1.7	2.1	1 ½
Germany	0.2	1.2	2.8	2.7	3.6	5.1	4.4	2.7	1.9	1.4	1 ½
Italy	4.7	5.1	6.2	6.5	6.3	5.1	4.5	4.0	5.3	3.9	2 ¼
Japan	0.1	0.7	2.2	3.1	3.3	1.7	1.2	0.7	-0.1	0.2	1 ¾
United Kingdom	4.1	4.8	7.8	9.5	5.9	3.7	1.6	2.5	3.4	2.5	3
United States	3.7	4.0	4.9	5.4	4.2	3.1	2.7	2.6	2.8	2.9	3
Other industrialized countries	4.2	4.2	5.3	6.3	5.5	4.2	3.9	3.3	3.4	2.7	2 ½
Memo items:											
Western Europe	2.8	3.2	4.7	5.3	4.9	4.3	3.6	3.0	3.0	2.4	2 ¼
European Union (15)	2.8	3.2	4.8	5.3	4.9	4.4	3.6	3.0	3.0	2.5	2 ¼

Source: United Nations, based on IMF, *International Financial Statistics*.

[a] Data for country groups are weighted averages, where weights for each year are consumption expenditure for the year valued at 1993 prices and exchange rates.

[b] Forecast.

Table A.8.
MAJOR DEVELOPED ECONOMIES: FINANCIAL INDICATORS, 1986-1996

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Growth of real money[a] *(percentage change)*											
Canada	4.9	3.9	5.6	8.3	4.4	1.9	8.2	9.7	7.2	4.7	1.5
France	2.3	0.6	2.0	2.0	0.1	-4.0	-0.9	1.3	5.2	8.9	-2.5
Germany	3.2	4.0	4.2	2.6	14.8	2.5	2.4	7.5	0.1	2.1	5.2
Italy	0.6	1.5	1.0	4.8	1.1	2.0	0.8	3.7	1.5	-5.0	-5.8
Japan	7.4	11.1	9.4	9.7	5.8	0.3	-1.7	1.8	2.9	3.3	-0.8
United Kingdom	18.7	15.3	10.0	12.2	3.9	-4.6	4.8	1.6	3.8	10.7	7.6
United States	7.7	-0.1	2.3	1.2	0.6	-1.3	-4.3	-1.1	-2.1	3.1	-0.3
Short-term interest rates[b c] *(percentage)*											
Canada	8.2	8.5	10.4	12.1	11.6	7.4	6.8	3.8	5.5	5.7	3.0
France	7.7	8.0	7.5	9.1	9.9	9.5	10.4	8.8	5.7	6.4	3.7
Germany	4.6	3.7	4.0	6.6	7.9	8.8	9.4	7.5	5.4	4.5	3.3
Italy	13.4	11.5	11.3	12.7	12.4	12.2	14.0	10.2	8.5	10.5	8.8
Japan	4.8	3.5	3.6	4.9	7.2	7.5	4.6	3.1	2.2	1.2	0.5
United Kingdom	10.8	9.5	9.7	13.6	14.6	11.8	9.4	5.5	4.8	6.0	5.9
United States	6.8	6.7	7.6	9.2	8.1	5.7	3.5	3.0	4.2	5.8	5.3
Long-term interest rates[d c] *(percentage)*											
Canada	9.5	10.0	10.2	9.9	10.9	9.8	8.8	7.8	8.6	8.3	7.5
France	8.6	9.4	9.1	8.8	10.0	9.1	8.6	6.9	7.4	7.6	6.4
Germany	5.9	5.8	6.1	7.1	8.9	8.6	8.0	6.3	6.7	6.5	5.6
Italy	10.5	9.7	10.2	10.7	11.5	13.2	13.3	11.3	10.6	12.2	9.4
Japan	4.9	4.2	4.3	5.1	7.4	6.5	4.9	3.7	3.7	2.5	2.4
United Kingdom	9.9	9.5	9.4	9.6	11.1	9.9	9.1	7.9	8.1	8.3	8.1
United States	7.7	8.4	8.9	8.5	8.6	7.9	7.0	5.8	7.1	6.6	6.4
General government financial balances[e] *(percentage)*											
Canada	-5.4	-3.8	-2.5	-2.9	-4.1	-6.6	-7.4	-7.3	-5.3	-4.1	-2.7
France[f]	-2.7	-1.9	-1.7	-1.2	-1.6	-2.0	-3.8	-5.6	-5.6	-4.8	-4.1
Germany[g]	-1.3	-1.9	-2.2	0.1	-2.1	-3.3	-2.8	-3.5	-2.4	-3.5	-4.1
Italy	-11.7	-11.0	-10.7	-9.9	-11.0	-10.2	-9.5	-9.6	-9.0	-7.1	-6.7
Japan	-0.9	0.5	1.5	2.5	2.9	2.9	1.4	-1.6	-2.1	-3.3	-4.1
United Kingdom	-2.4	-1.4	1.0	0.9	-1.2	-2.5	-6.3	-7.8	-6.8	-5.7	-4.8
United States	-3.5	-2.6	-2.1	-1.7	-2.7	-3.3	-4.4	-3.6	-2.3	-2.0	-1.6

Sources: United Nations, based on IMF, *International Financial Statistics*, and OECD, *Economic Outlook*.

a Real money is here defined as broad money (denoted by M2 and comprising currency outside banks and demand deposits plus time, savings and foreign currency deposits of resident sectors other than central government) deflated by GDP deflators. Growth rates measure changes from year-end to year-end (1996 data are partly estimated).

b Money market rates.

c Some of the 1996 data are nine-month averages.

d Yield on long-term government bonds.

e Surplus (+) or deficit (-) as a percentage of nominal GNP or GDP; 1996 data are OECD estimates.

f As of 1992, deficits are calculated using "Maastricht" definition.

g Prior to 1991, data refer to Western Germany only.

Table A.9.
MAJOR DEVELOPED ECONOMIES: EFFECTIVE EXCHANGE RATES, BROAD MEASUREMENT, 1986-1996[a]

1990=100

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Nominal effective exchange rates											
Canada	81.9	84.2	90.8	97.4	100.0	103.1	98.1	94.1	89.7	88.6	91.1
France	90.1	91.6	91.3	91.8	100.0	99.7	104.9	109.3	113.0	118.1	118.8
Germany	81.7	88.4	89.9	91.1	100.0	101.2	106.9	112.5	116.8	125.1	123.1
Italy	87.8	89.8	89.2	92.8	100.0	101.0	100.7	86.7	86.2	79.1	87.3
Japan	84.2	94.8	106.9	104.4	100.0	111.7	120.4	148.6	166.5	177.4	158.1
United Kingdom	92.5	92.7	99.8	98.3	100.0	102.3	100.3	93.2	95.6	92.3	94.5
United States	87.4	85.0	86.4	94.8	100.0	104.3	107.5	116.7	122.9	123.5	131.1
Real effective exchange rates											
Canada	91.0	93.5	101.8	105.0	100.0	97.6	91.4	88.5	87.8	92.1	91.4
France	99.7	101.7	98.8	95.8	100.0	97.9	101.6	103.1	102.6	103.1	103.1
Germany	96.7	101.0	99.7	96.7	100.0	97.8	100.6	100.9	99.8	104.8	100.3
Italy	90.0	91.6	90.1	93.1	100.0	101.0	98.3	85.0	83.3	81.0	91.4
Japan	111.2	114.5	120.4	112.1	100.0	104.8	106.7	121.7	126.5	127.2	109.5
United Kingdom	92.3	93.5	100.3	98.2	100.0	102.9	99.8	91.7	92.6	89.8	92.4
United States	116.6	105.6	97.9	101.9	100.0	101.2	101.1	103.4	100.7	95.7	100.0

Source: Morgan Guaranty Trust Company, *World Financial Markets*.

[a] Indices based on a "broad" measure currency basket of 22 OECD currencies and 23 developing-economy currencies (mostly Asian and Latin American). The real effective exchange rate, which adjusts the nominal index for relative price changes, gauges the effect on international price competitiveness of the country's manufactures due to currency changes and inflation differentials. A rise in the index implies a fall in competitiveness and vice versa. The relative price changes are based on indices most closely measuring the prices of domestically produced finished manufactured goods, excluding food and energy, at the first stage of manufacturing. The weights for currency indices are derived from 1990 bilateral trade patterns of the corresponding countries.

Table A.10.

ECONOMIES IN TRANSITION: OUTPUT AND DEMAND INDICATORS, 1989-1996

Annual percentage change

	1989	1990	1991	1992	1993	1994	1995	1996[a]
Industry, gross product								
Central and Eastern Europe[b]	-0.8	-15.9	♦ -16.7	-6.5	0.8	6.7	7.6	7.2
Albania		-7.5	-37.0	-44.0	-10.0	-18.6	-7.2	..
Bulgaria	2.2	-16.8	-27.8	-15.0	-6.9	8.5	5.4	-1.0
Czechoslovakia	0.8	-3.7	-23.0	-7.9				
Czech Republic					-5.1	2.1	9.2	6.8
Slovakia					-10.6	4.6	8.2	2.5
Hungary	-1.0	-9.6	-18.2	-9.7	4.0	9.5	4.6	3.3
Poland	-0.5	-24.2	-11.9	3.9	5.6	11.9	9.4	9.1
Romania	-5.3	-23.7	-22.8	-21.9	1.3	3.3	9.4	9.8
Croatia		-11.0	-29.0	-15.0	-6.0	-2.7	0.3	3.1
The former Yugoslav Republic of Macedonia		-10.6	-17.2	-16.0	-10.0	-10.6	-9.8	3.2
Slovenia		-10.5	12.4	-13.2	-2.5	6.4	2.0	1.0
Federal Republic of Yugoslavia						1.2	3.8	6.8
Baltic States						-15.7	0.6	1.7
Estonia						-2.0	1.9	1.1
Latvia						-6.8	-6.3	0.7
Lithuania						-28.0	6.2	2.8
Soviet Union	1.7	-1.2	-7.8					
Commonwealth of Independent States				-18.0	-12.0	-21.5	-5.8	-3.4
Armenia						5.3	2.4	1.0
Azerbaijan						-22.7	-17.2	-6.7
Belarus						-17.1	-11.9	3.2
Georgia						-39.7	-9.8	7.7
Kazakstan						-28.1	-8.2	0.3
Kyrgyzstan						-28.0	-17.8	10.8
Republic of Moldova						-27.7	-3.9	-8.5
Russian Federation						-20.9	-3.3	-5.0
Tajikistan						-25.4	-5.1	-19.8
Turkmenistan						-24.7	-6.4	17.9
Ukraine						-27.3	-12.0	-5.1
Uzbekistan						1.6	0.1	6.0
Agriculture, gross product								
Central and Eastern Europe[b]	0.2	-3.4	♦ -2.3	-14.0	-1.9	-0.2	6.1	-1.0
Albania		-6.9	-24.0	-15.0	15.0	..	..	..
Bulgaria	1.2	-6.0	-0.3	-12.0	-18.2	6.8	15.4	-13.0
Czechoslovakia	1.7	-3.9	-8.4	-12.7				
Czech Republic					-2.3	-6.0	5.0	-0.2
Slovakia					-8.1	2.6	0.1	1.9
Hungary	-1.3	-4.8	-6.2	-20.0	-9.7	9.7	1.9	5.0
Poland	1.5	-2.2	-1.6	-12.8	1.5	-7.8	10.7	-4.0
Romania	-5.0	-2.9	1.0	-13.8	12.4	0.2	4.5	1.8
Croatia			-7.0	-13.0	-2.3	-3.0	1.0	2.1
The former Yugoslav Republic of Macedonia			17.9	-	-20.3	8.2	5.0	-4.0
Slovenia			-0.2	-5.5	-3.5	6.4	3.6	..
Federal Republic of Yugoslavia			10.0	-18.0	-3.0	6.0	4.0	-3.0

Table A.10. (continued)

	1989	1990	1991	1992	1993	1994	1995	1996[a]
Baltic States						-15.7	-0.6	..
Estonia						-11.0	-2.4	-2.5
Latvia						-16.9	-3.4	-11.0
Lithuania						-17.1	1.8	..
Soviet Union	1.3	-2.8	-7.0					
Commonwealth of Independent States				..	..	-13.6	-7.2	-6.4
Armenia						3.0	5.0	7.0
Azerbaijan						-13.0	-7.0	5.0
Belarus						-14.0	-5.0	2.0
Georgia						11.0	13.0	15.0
Kazakstan						-20.0	-23.8	-10.0
Kyrgyzstan						-18.0	-9.0	3.0
Republic of Moldova						-25.0	3.0	-10.0
Russian Federation						-12.0	-8.0	-7.0
Tajikistan						-25.0	-28.0	-15.0
Turkmenistan						-11.0	-18.0	-2.0
Ukraine						-16.0	-4.0	-8.0
Uzbekistan						-8.0	-3.0	-7.0
Gross investment[c]								
Central and Eastern Europe[b]	-0.1	-7.7	•-14.7	1.5	-0.3	11.3	11.1	11.9
Albania		-14.8	..	..	..	..	..	..
Bulgaria	-10.1	-18.5	-19.9	-1.5	-17.5	1.1	8.8	-18.0
Czechoslovakia	1.6	6.1	-27.2	4.7				
Czech Republic					-7.7	17.3	14.1	15.5
Slovakia					-4.1	-5.1	5.8	33.3
Hungary	7.0	-9.6	-11.9	-1.3	2.0	12.5	-4.3	-1.0
Poland	-2.4	-10.1	-4.1	0.7	2.9	9.2	18.5	19.2
Romania	-1.6	-38.3	-25.8	-1.1	8.3	20.7	8.6	5.3
Baltic States						..	..	..
Estonia					10.2	10.2	2.3	..
Latvia					15.8	0.8	12.6	..
Lithuania						..	..	..
Soviet Union	4.7	1.0	-12.0					
Commonwealth of Independent States				-39.0	-10.0	-22.1	-18.9	-15.9
Armenia					-24.0	-35.0	..	..
Azerbaijan					-39.0	89.0	-18.0	74.0
Belarus					-15.0	-11.0	-31.0	-10.0
Georgia					-62.0	-0.5	2.0	19.0
Kazakstan					-39.0	-15.0	-38.0	-35.0
Kyrgyzstan					-31.0	-42.0	82.0	18.0
Republic of Moldova					-44.0	-51.0	-17.0	-15.0
Russian Federation					-12.0	-26.0	-10.0	-18.0
Tajikistan					..	-43.0	-25.0	..
Turkmenistan						..	..	..
Ukraine					-10.0	-23.0	-35.0	-20.0
Uzbekistan					-5.0	-22.0	4.0	7.0

Sources: United Nations, based on data of ECE and Project LINK.

• Indicates discontinuity in the series.

a Preliminary estimate.

b Until 1990, including the former German Democratic Republic.

c Investment outlays for the Commonwealth of Independent States.

Table A.11.

DEVELOPING COUNTRIES: INVESTMENT, SAVING AND NET TRANSFERS, 1980-1995

Percentage of GDP

	Gross domestic investment				Gross domestic saving				Net transfer of resources			
	1980	1985	1990	1995	1980	1985	1990	1995	1980	1985	1990	1995
All developing countries	25.9	23.3	25.2	27.3	29.0	23.9	25.9	26.7	-3.1	-0.6	-0.6	0.6
by region:												
Latin America	24.8	19.1	19.8	19.7	23.6	23.8	22.1	19.5	1.2	-4.7	-2.3	0.3
Africa	25.1	20.7	22.6	21.8	30.0	20.8	19.3	16.7	-4.9	-0.1	3.2	5.2
Western Asia	23.7	20.7	23.1	22.0	40.9	19.5	24.3	24.2	-17.1	1.3	-1.2	-2.1
Eastern and Southern Asia[a]	26.1	24.1	29.3	31.9	23.8	24.2	28.9	30.4	2.2	-0.2	0.4	1.5
by analytical grouping:												
Net-creditor countries	24.2	23.2	24.7	24.7	56.9	27.4	29.8	30.2	-32.7	-4.1	-5.0	-5.5
Net-debtor countries	26.1	23.3	25.3	27.6	24.6	23.5	25.4	26.3	1.5	-0.2	-0.1	1.3
Net fuel exporters	25.2	21.4	23.7	22.8	37.7	23.3	25.5	24.6	-12.5	-1.9	-1.8	-1.8
Net fuel importers	26.3	24.4	25.8	28.6	22.9	24.3	26.0	27.3	3.4	0.2	-0.2	1.3
Four exporters of manufacturers	34.3	26.2	31.3	32.7	29.9	32.3	34.5	34.0	4.4	-6.0	-3.2	-1.2
Memo items:												
Sub-Saharan Africa	19.5	17.3	18.1	18.5	14.4	15.3	13.8	13.4	5.1	2.0	4.3	5.1
Least developed countries	19.0	14.7	15.5	18.5	5.6	3.7	5.0	6.9	13.4	11.0	10.5	11.6
Selected developing countries												
Argentina	25.3	17.6	14.0	18.3	23.8	23.1	19.7	18.4	1.4	-5.5	-5.7	-0.0
Bangladesh	14.9	12.9	12.8	16.6	2.1	2.0	2.7	8.3	12.8	10.9	10.1	8.3
Brazil	23.3	19.2	21.5	21.9	21.1	24.4	23.2	21.1	2.3	-5.2	-1.7	0.8
China	35.2	37.8	34.7	40.5	34.9	33.7	37.5	42.0	0.3	4.1	-2.8	-1.6
Côte d'Ivoire	26.5	13.0	8.5	13.2	20.4	27.3	13.0	20.1	6.2	-14.4	-4.6	-6.9
Egypt	27.5	26.7	21.9	16.9	15.2	14.5	6.8	6.0	12.4	12.1	15.1	11.0
India	20.9	23.9	25.2	24.5	17.4	20.8	22.4	21.8	3.5	3.1	2.8	2.7
Indonesia	24.3	26.2	30.6	37.8	37.1	27.9	32.2	35.8	-12.8	-1.8	-1.5	2.0
Kenya	29.2	26.0	24.2	19.2	18.1	24.9	19.0	12.9	11.1	1.1	5.2	6.3
Mexico	27.2	20.8	22.8	15.3	24.9	25.9	21.7	18.5	2.3	-5.1	1.2	-3.2
Nigeria	22.2	9.0	14.7	18.4	32.3	12.6	29.4	20.9	-10.1	-3.7	-14.6	-2.4
Peru	29.0	18.4	14.7	16.8	32.0	24.9	15.1	10.7	-3.0	-6.5	-0.4	6.1
Republic of Korea	32.0	29.6	36.9	37.1	24.8	30.9	36.4	36.1	7.3	-1.3	0.5	1.0
South Africa	28.3	20.1	17.1	18.3	36.5	29.2	23.1	18.2	-8.2	-9.1	-6.0	0.1
Thailand	29.1	28.2	41.1	43.1	22.9	25.5	33.6	36.2	6.3	2.7	7.5	6.9
Tunisia	29.4	30.2	27.1	24.0	24.0	24.1	20.0	20.3	5.4	6.0	7.0	3.6
Turkey	18.2	16.5	25.5	24.9	11.4	13.4	21.2	20.2	6.8	3.1	4.3	4.7
Zambia	23.3	14.9	17.3	11.7	19.3	14.1	17.8	3.3	4.0	0.8	-0.5	8.4

Source: United Nations based on World Bank, *1997 World Development Indicators* (CD- ROM), and United Nations Secretariat estimates.

[a] Excluding China.

Table A.12.
DEVELOPING COUNTRIES: MAJOR CATEGORIES OF FOREIGN EXCHANGE EARNINGS, 1985-1995

Percentage share in total foreign exchange earnings

	Manufactures			Non-fuel primary commodities			Fuels			Services[a]			Workers' remittances		
	1985	1990	1995	1985	1990	1995	1985	1990	1995	1985	1990	1995	1985	1990	1995
All developing countries	27.8	42.5	54.4	17.4	14.9	13.1	32.6	19.6	11.6	11.4	12.2	12.7	2.7	2.4	1.8
by region:															
Latin America	18.0	23.7	36.9	31.3	31.8	26.9	27.2	18.9	11.3	13.9	16.1	14.6	1.4	2.4	3.3
Africa	8.1	15.2	19.1	20.2	16.2	19.4	51.3	37.4	31.7	12.0	15.5	17.8	5.2	5.7	4.9
Western Asia	10.9	18.0	23.1	4.8	7.0	7.9	57.3	49.3	44.0	10.2	11.5	15.7	2.2	2.9	2.6
Eastern and Southern Asia[b]	49.9	63.1	69.3	16.0	11.4	9.4	14.6	6.8	3.6	10.5	10.2	10.9	2.6	1.3	0.8
By analytical groupings:															
Net-creditor countries	26.7	38.7	50.0	4.1	4.0	4.1	47.0	34.1	23.2	7.9	8.8	11.5	..	..	..
Net-debtor countries	28.2	43.9	55.8	22.2	18.9	15.9	27.4	14.3	8.0	12.6	13.4	13.1	3.6	3.2	2.4
Net fuel exporters	6.7	12.1	26.8	6.2	7.9	9.6	67.3	60.5	46.3	7.6	8.7	10.2	2.1	2.5	2.1
Net fuel importers	42.6	55.1	62.3	25.3	17.8	14.0	8.3	2.6	1.6	14.0	13.8	13.5	3.1	2.3	1.7
Four exporters of manufacturers	69.9	70.2	71.9	6.7	5.3	4.7	6.5	4.0	2.4	13.0	13.0	14.1	..	..	..
Memo items															
Sub-Saharan Africa	7.1	14.9	15.8	46.1	38.9	43.0	25.1	23.1	19.7	15.9	16.5	16.9	2.1	1.6	2.0
Least developed countries	11.0	19.4	20.1	46.0	29.8	32.0	17.2	21.3	18.7	14.9	13.2	16.4	6.5	10.4	9.5
Selected developing countries															
Argentina	17.1	21.7	25.5	58.0	46.5	41.4	6.2	5.9	7.8	16.0	14.7	10.3	..	..	..
Bangladesh	36.9	44.6	..	17.5	12.2	..	1.4	0.7	..	13.4	13.5	11.7	28.2	26.8	20.4
Brazil	38.3	44.2	41.8	42.5	38.1	34.6	5.6	1.9	0.7	7.1	10.2	10.4	0.1	1.4	4.9
China	30.6	60.8	70.4	21.4	15.6	10.2	21.8	7.2	3.0	10.2	9.6	12.5	0.6	0.2	0.2
Cote d'Ivoire	8.1	..	..	69.0	..	..	8.4	..	..	12.5	16.6	12.2	..	..	..
Egypt	3.7	11.1	10.4	8.0	7.3	5.8	24.9	7.7	9.6	28.8	39.7	47.6	30.6	28.5	17.9
India	34.7	49.9	61.7	21.4	18.1	19.8	3.6	2.1	1.4	21.4	18.0	..	15.6	9.2	..
Indonesia	10.1	31.6	43.3	18.5	18.4	20.5	63.0	39.3	21.7	4.2	8.3	10.7	0.3	0.6	1.2
Kenya	7.0	14.3	..	44.6	28.1	..	10.0	6.4	..	35.9	51.0	34.8	..	..	..
Republic of Korea	72.9	76.4	73.9	4.4	4.4	3.7	2.5	0.9	1.6	16.9	14.6	17.2	0.8	0.8	0.4
Malaysia	23.4	45.0	66.4	35.2	22.9	15.1	27.0	15.3	6.2	10.9	11.2	..	..	..	..
Mexico	..	32.3	63.4	..	14.0	9.7	..	27.9	8.4	13.7	14.8	10.6	3.3	4.6	3.8
Morocco	21.2	26.5	32.0	29.2	22.4	28.9	2.0	1.8	1.4	23.8	24.1	18.1	23.4	24.1	17.3
Saudi Arabia	2.0	5.5	..	0.3	1.0	..	60.9	71.9	..	8.2	5.4	5.9	..	..	..
South Africa	..	..	37.3	..	..	18.7	..	..	6.8	10.3	12.7	13.1	..	..	..
Thailand	26.3	46.0	54.7	41.3	25.4	18.9	0.9	0.6	0.5	20.0	20.5	20.0	..	..	..
.Tunisia	25.5	41.5	49.5	7.5	8.2	7.6	24.1	10.4	5.3	32.3	28.8	28.6	9.1	10.2	7.7
Turkey	38.3	35.0	..	21.4	15.5	..	3.0	1.2	..	21.8	31.8	35.3	13.1	12.9	8.0
Venezuela	7.7	8.4	11.7	9.1	8.0	7.3	67.4	65.7	64.8	4.6	5.5	6.6	..	..	..

Source: United Nations, based on data from United Nations Statistics Division and IMF.
a Including receipts from transportation, travel and business services but not investment income or workers' remittances.
b Including China.

Table A.13.
DEVELOPING COUNTRIES: INFLATION, 1987-1997[a]

Annual percentage change

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996[b]	1997[c]
All developing countries	57.5	123.8	361.2	532.0	81.6	132.9	253.9	134.7	21.0	16.6	15
by region:											
Latin America	159.8	363.6	1128.6	1679.7	210.7	354.1	757.8	326.4	23.4	19.4	12
Africa	19.3	18.4	19.8	16.2	96.0	172.5	111.1	244.7	40.6	34.9	48
Western Asia	23.9	33.0	27.7	23.9	27.9	29.0	27.0	41.6	41.3	33.7	30
Eastern and Southern Asia	4.6	6.4	6.2	7.8	9.5	7.3	5.8	7.1	6.8	5.8	6
China	8.7	18.8	18.0	3.2	3.3	6.4	14.7	24.1	17.1	8.3	7
by analytical grouping:											
Net-creditor countries	-0.0	1.4	2.8	4.1	5.2	2.6	2.2	2.8	3.7	2.4	3
Net-debtor countries	63.7	137.0	399.8	588.8	89.8	146.9	281.0	148.8	22.8	18.2	16
Net fuel exporters	53.5	49.1	20.2	17.5	18.0	16.4	14.3	16.5	28.9	25.7	15
Net fuel importers	58.8	148.8	475.3	704.0	102.8	171.9	334.0	174.1	18.3	13.6	14
Four exporters of manufactures	2.4	5.0	5.5	7.2	7.9	5.9	4.7	5.7	4.8	4.4	3
Memo items:											
Sub-Saharan Africa	35.2	24.6	25.8	23.1	283.3	533.4	333.5	780.4	87.0	86.8	136
Least developed countries	44.2	31.6	33.4	28.3	365.9	688.2	430.4	997.9	103.6	108.1	176

Source: United Nations, based on IMF, *International Financial Statistics*.
[a] Weights used are GDP in 1993 dollars.
[b] Preliminary estimates based on data for part of the year.
[c] Forecast.

Table A.14.
SELECTED DEVELOPING ECONOMIES: REAL EFFECTIVE EXCHANGE RATES, BROAD MEASUREMENT,1986-1996[a]

1990 = 100

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Argentina	107.1	94.4	104.8	86.4	100.0	117.8	115.7	117.3	113.6	111.1	115.1
Brazil	62.0	61.7	67.4	82.9	100.0	80.8	73.5	82.7	94.5	100.7	99.1
Chile	110.8	105.8	98.7	101.9	100.0	106.1	113.8	113.9	114.0	120.3	126.4
Mexico	90.0	92.7	112.3	107.6	100.0	106.2	107.7	116.6	112.0	78.7	89.7
Venezuela	164.0	119.4	135.5	115.7	100.0	99.8	100.7	104.0	109.0	138.8	118.7
Hong Kong	95.7	91.9	93.2	98.1	100.0	103.5	106.1	111.6	114.5	112.9	120.9
Indonesia	134.5	103.7	101.9	102.9	100.0	100.9	99.6	101.6	100.3	98.7	103.2
Malaysia	126.2	118.7	106.0	103.5	100.0	98.8	106.4	109.6	106.4	106.1	111.0
Philippines	101.4	98.1	100.2	106.2	100.0	97.0	105.8	97.3	104.5	103.5	115.5
Republic of Korea	89.1	88.5	96.3	107.9	100.0	97.5	88.3	85.8	84.1	85.6	88.0
Singapore	98.3	90.7	90.1	95.5	100.0	102.5	105.2	106.1	109.2	110.2	114.8
Taiwan Province of China	91.1	96.9	100.5	107.1	100.0	97.4	96.0	92.8	91.2	91.6	90.0
Thailand	102.6	96.9	97.4	100.4	100.0	102.3	98.6	100.1	99.4	97.7	104.5
Turkey	80.4	84.3	87.2	95.4	100.0	97.1	89.1	92.6	72.4	75.6	74.3

Source: Morgan Guaranty Trust Company, *World Financial Markets*.
[a] Measured against a broad currency basket of 22 OECD currencies and 23 developing-economy currencies (mostly Asian and Latin American). The real effective exchange rate, which adjusts the nominal index for relative price changes, gauges the effect on international price competitiveness of the country's manufactures due to currency changes and inflation differentials. A rise in the index implies a fall in competitiveness and vice versa. The relative price changes are based on indices most closely measuring the prices of domestically produced finished manufactured goods, excluding food and energy, at the first stage of manufacturing. The weights for currency indices are derived from 1990 bilateral trade patterns of the corresponding countries.

II. INTERNATIONAL TRADE

Table A.15.
DIRECTION OF TRADE: EXPORTS (F.O.B.), 1980-1996

Origin		Destination[a]								
		World[b]	Developed economies	Economies in transition	Developing countries *(total)*	Latin America and the Caribbean	Africa	Western Asia	Eastern and Southern Asia	Other Asia[c]
		Billions of dollars	Percentage							
World[b]	1980	1835.1	67.0	4.9	25.6	6.1	3.8	4.5	7.1	1.1
	1985	1860.3	68.8	5.5	24.1	4.3	2.8	4.4	7.6	2.1
	1990	3383.7	72.2	3.5	23.0	3.8	2.2	3.0	9.7	1.5
	1995	5011.0	65.3	4.0	29.4	4.9	1.9	2.6	13.7	3.2
	1996[d]	5171.2	64.3	4.6	29.7	5.1	1.9	2.8	13.5	3.4
Developed economies	1980	1229.2	68.8	3.9	25.7	6.0	4.7	5.0	5.8	1.2
	1985	1279.0	72.9	3.1	23.0	4.5	3.1	4.3	6.2	2.0
	1990	2442.0	76.4	2.9	20.0	3.9	2.3	2.9	7.5	0.9
	1995	3270.1	70.5	3.4	25.4	5.1	2.0	2.7	10.7	1.8
	1996[d]	3325.6	69.5	3.9	25.9	5.4	2.0	3.0	10.8	1.8
Economies in transition	1995	202.9	52.5	33.8	12.6	0.9	0.8	3.4	3.0	2.8
	1996[d]	235.5	49.6	36.6	12.4	0.9	0.8	3.6	2.7	3.6
Developing countries	1980	470.1	66.9	2.4	26.7	6.9	2.0	3.4	10.7	0.8
	1985	447.7	64.0	3.0	28.8	4.7	2.0	4.6	12.2	2.3
	1990	777.9	61.4	2.2	32.9	4.0	1.9	3.0	17.1	3.1
	1995	1471.4	54.8	1.4	40.9	4.8	2.0	2.2	22.0	6.3
	1996[d]	1537.0	54.9	1.4	40.5	5.0	2.0	2.2	20.8	6.9
of which:										
Latin America and the Caribbean	1980	111.6	66.0	3.7	28.4	20.9	1.7	1.7	1.1	0.6
	1985	80.8	72.1	3.2	22.4	12.5	2.3	2.5	1.6	1.6
	1990	129.3	70.5	1.6	26.2	16.0	1.1	1.9	3.1	0.7
	1995	243.9	70.3	0.7	28.2	19.4	0.9	1.2	3.7	1.2
	1996[d]	263.1	69.2	0.7	29.4	20.0	0.9	1.2	4.0	1.4
Africa	1980	69.9	66.5	2.1	11.9	2.4	3.0	0.9	1.5	0.3
	1985	51.2	71.4	2.5	13.6	3.3	3.6	1.5	1.6	0.4
	1990	73.7	69.3	1.4	15.2	1.3	5.9	1.6	2.8	0.4
	1995	96.9	64.4	1.2	23.5	1.9	10.2	2.1	5.6	1.2
	1996[d]	100.6	64.0	1.2	23.7	1.9	10.1	1.8	6.0	1.2
Western Asia	1980	83.2	74.6	0.9	22.2	2.9	1.4	3.7	10.2	0.1
	1985	81.7	58.9	4.1	33.7	4.6	2.0	11.4	11.5	0.1
	1990	100.3	61.5	3.4	30.0	3.4	1.9	7.7	10.2	0.4
	1995	128.6	50.7	3.1	35.1	1.8	2.5	6.3	17.8	1.4
	1996[d]	143.2	49.2	3.5	35.9	1.7	2.6	5.8	18.8	2.0
Eastern and Southern Asia	1980	129.6	61.2	3.0	34.8	2.3	2.5	3.9	20.1	2.1
	1985	141.7	60.3	2.2	36.2	1.6	1.5	3.2	19.9	6.3
	1990	328.8	59.6	1.7	37.3	1.6	1.3	2.0	20.5	7.4
	1995	685.9	50.2	1.1	47.3	2.3	1.3	1.7	25.1	12.3
	1996[d]	695.5	49.9	1.2	47.3	2.3	1.2	1.7	24.7	12.6
Other Asia[c]	1980	19.9	44.8	6.4	45.3	2.2	0.4	2.1	6.6	2.1
	1985	39.6	40.9	8.2	48.6	1.8	1.5	5.5	37.9	1.6
	1990	51.5	34.5	5.8	57.7	1.0	1.9	1.8	51.4	0.8
	1995	158.2	51.7	2.2	45.4	2.0	1.3	1.5	36.6	1.1
	1996[d]	177.5	54.9	2.5	41.9	1.9	1.4	1.6	33.1	1.1

Source: United Nations, based on data of IMF, *Direction of Trade Statistics*.

[a] Owing to incomplete specification of destinations in underlying data, shares of trade to destinations do not add up to 100 per cent.
[b] Including data for economies in transition; before 1994, data for economies in transition are highly incomplete.
[c] Including data for China, Democratic People's Republic of Korea, Mongolia and Viet Nam.
[d] Estimates.

Table A.16.
DIRECTION OF TRADE: IMPORTS (F.O.B.), 1980-1996

Origin		Destination[a] World[b]	Developed economies	Economies in transition	Developing countries (total)	Latin America and the Caribbean	Africa	Western Asia	Eastern and Southern Asia	Other Asia[c]
		Billions of dollars								
World[b]	1980	1910.7	1221.9	79.1	580.3	105.0	71.2	166.1	118.1	20.2
	1985	1951.1	1319.3	95.2	522.3	114.3	57.5	77.1	140.5	32.0
	1990	3495.3	2494.9	98.6	873.1	157.1	71.2	109.0	285.6	91.1
	1995	4323.3	2917.8	164.3	1188.9	201.2	64.0	97.9	443.2	197.8
	1996[d]	5183.2	3489.5	218.1	1427.8	237.1	73.7	109.7	554.6	238.8
		Percentage								
Developed economies	1980	63.2	64.5	40.6	62.9	62.9	70.4	66.3	55.4	73.7
	1985	67.0	70.1	42.0	63.1	64.9	73.8	65.1	56.0	67.5
	1990	71.0	74.2	62.1	61.6	70.7	70.0	68.6	56.2	48.0
	1995	66.8	70.6	55.3	59.8	70.7	66.9	67.0	53.5	57.2
	1996[d]	65.7	69.9	55.0	58.2	69.4	64.5	67.7	52.0	54.5
Economies transition	1995	4.1	3.4	35.8	1.6	0.8	1.5	4.4	0.8	4.5
	1996[d]	4.1	3.2	36.0	1.3	0.8	1.8	4.8	0.8	5.8
Developing Countries	1980	30.8	31.8	16.4	30.1	34.1	17.5	24.3	41.8	15.7
	1985	26.7	26.3	15.9	30.1	32.1	18.8	25.5	40.5	24.7
	1990	24.9	22.6	18.2	33.0	27.3	21.2	24.9	41.1	42.5
	1995	28.2	25.2	8.3	36.9	27.2	29.6	25.3	44.4	44.4
	1996[d]	29.3	26.2	8.1	38.7	28.4	31.4	24.2	45.8	45.8
of which:										
Latin America and the Caribbean	1980	5.5	5.6	3.0	5.7	15.0	2.0	0.9	1.2	2.9
	1985	5.9	6.2	3.3	5.1	18.2	3.2	2.8	2.1	4.1
	1990	4.5	4.7	2.1	4.1	17.8	1.9	2.5	1.6	2.2
	1995	4.7	5.1	1.1	4.2	17.0	2.0	2.3	1.4	2.1
	1996[d]	5.0	5.4	0.9	4.6	17.2	2.2	2.2	1.5	2.7
Africa	1980	4.5	5.5	2.1	1.8	1.7	4.4	1.0	0.9	0.5
	1985	3.6	4.2	1.4	2.2	5.1	5.0	1.2	1.2	0.6
	1990	2.5	2.8	1.2	1.7	1.4	7.0	1.9	0.8	0.6
	1995	1.9	2.2	0.7	1.6	0.8	9.8	1.5	0.8	1.0
	1996[d]	2.0	2.3	0.7	1.7	0.8	10.7	1.4	0.9	1.0
Western Asia	1980	8.9	8.9	6.0	9.1	8.7	5.2	9.8	12.8	0.4
	1985	4.4	3.8	3.2	6.2	5.1	3.7	11.0	6.6	0.3
	1990	3.6	3.2	4.5	4.6	4.1	2.4	8.6	4.6	0.8
	1995	2.6	2.3	2.0	3.3	1.0	3.5	7.1	3.7	1.5
	1996[d]	2.7	2.4	2.0	3.5	1.0	3.6	6.1	4.0	2.3
Eastern and Southern Asia	1980	6.2	6.1	1.3	7.2	1.1	2.1	3.9	14.7	3.4
	1985	7.2	6.8	3.4	9.2	1.0	2.5	4.7	16.3	14.0
	1990	8.2	7.0	4.8	12.5	1.9	4.4	5.3	16.6	33.3
	1995	10.6	8.8	2.5	15.4	5.0	8.2	7.1	19.3	26.3
	1996[d]	11.1	9.1	2.6	16.7	6.5	8.7	7.8	20.4	26.9
Other Asia[c]	1980	1.1	0.7	1.9	2.1	0.5	0.8	1.0	5.1	1.6
	1985	1.6	1.1	2.2	3.0	0.9	0.9	0.7	7.6	1.1
	1990	2.6	1.8	3.3	5.1	0.6	1.3	1.4	10.3	0.9
	1995	4.7	3.9	1.2	6.9	1.5	2.1	1.8	12.4	1.4
	1996[d]	4.8	4.1	1.5	6.9	1.4	2.1	1.7	12.3	1.4

Source: United Nations, based on data of IMF, *Direction of Trade Statistics*.

[a] Owing to incomplete specification of destinations in underlying data, shares of trade to destinations do not add up to 100 per cent.
[b] Including data for economies in transition; before 1994, data for economies in transition are highly incomplete.
[c] Including data for China, Democratic People's Republic of Korea, Mongolia and Viet Nam.
[d] Estimates.

Table A.17.
COMMODITY COMPOSITION OF WORLD TRADE: EXPORTS, 1980-1995

Billions of dollars and percentage

Exporting country group	Total exports (billions of dollars)			Primary commodities											
				Food			Agricultural raw materials			Fuels			Ores and metals		
	1980	1990	1995	1980	1990	1995	1980	1990	1995	1980	1990	1995	1980	1990	1995
World (billions of dollars)	2027.6	3422.0	4991.2	196.0	296.5	408.9	93.4	127.7	177.7	492.5	364.0	358.7	43.4	50.0	62.8
World (percentage share)				(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)
Developed economies	1239.8	2414.2	3373.9	64.1	67.7	66.7	61.5	63.8	60.3	17.7	28.1	31.3	55.5	56.8	55.3
Economies in transition[a]	164.4	196.6	208.0	3.1	3.5	3.4	7.1	8.8	8.0	8.2	16.5	12.1	8.4	7.8	8.8
Developing countries	623.4	811.2	1409.3	32.8	28.8	29.9	31.5	27.3	31.6	74.1	55.4	56.6	36.1	35.4	35.9
Latin America	102.4	136.2	231.2	14.8	11.2	11.3	6.3	6.5	8.0	8.1	9.4	9.6	13.8	15.9	15.5
Africa	139.4	103.5	109.7	6.2	3.9	3.6	4.9	3.8	3.6	18.4	14.1	12.9	10.9	7.3	6.2
Western Asia	220.6	119.9	141.1	2.1	2.2	2.0	1.5	1.2	1.5	40.9	21.8	22.9	3.1	4.0	3.4
Eastern and Southern Asia	141.1	385.2	773.2	7.3	8.8	10.0	16.9	13.1	16.1	6.1	8.5	9.4	6.8	6.4	8.8
Other Asia[b]	19.9	66.3	154.0	2.4	2.6	3.1	1.9	2.7	2.3	0.6	1.7	1.8	1.5	1.8	2.0

Exporting country group	Manufactures														
	Textiles			Chemicals			Machinery and transport			Metals			Other		
	1980	1990	1995	1980	1990	1995	1980	1990	1995	1980	1990	1995	1980	1990	1995
World (billions of dollars)	94.4	221.9	323.4	138.5	303.5	471.0	505.6	1208.7	1922.9	124.4	185.5	261.3	339.2	664.2	1004.6
World (percentage share)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)
Developed economies	61.7	49.1	42.0	87.2	82.6	79.3	86.1	84.2	76.4	78.9	69.2	63.1	68.8	74.6	70.0
Economies in transition[a]	4.3	3.5	4.2	5.0	5.2	4.2	8.2	3.3	1.6	6.2	12.3	13.5	14.0	3.7	3.2
Developing countries	34.0	47.3	53.8	7.8	12.2	16.4	5.8	12.5	22.0	14.9	18.5	23.4	17.2	21.7	26.8
Latin America	2.3	2.1	3.0	2.0	2.2	2.6	1.0	1.2	2.9	5.0	7.9	7.6	1.5	1.8	2.9
Africa	1.5	1.9	1.9	0.9	1.2	1.1	0.1	0.2	0.2	3.8	2.1	2.7	5.7	2.6	1.6
Western Asia	2.1	3.4	3.6	1.7	2.2	1.5	0.5	0.4	0.5	1.0	2.0	1.8	1.3	1.2	1.3
Eastern and Southern Asia	23.5	31.9	33.3	2.3	5.3	9.2	4.0	9.7	16.8	4.4	5.4	8.4	7.9	14.1	16.8
Other Asia[b]	4.7	8.0	12.0	0.8	1.3	1.9	0.1	0.9	1.6	0.6	1.2	2.9	0.8	2.0	4.2

Source: United Nations Statistics Division.

[a] Data for 1995 include trade flows between the States of the former USSR. Prior to 1992, these flows were considered internal.
[b] Including China, Democratic People's Republic of Korea, Mongolia and Viet Nam; China accounts for more than 90 per cent of amounts shown.

Table A.18.
COMMODITY COMPOSITION OF WORLD TRADE: IMPORTS, 1980-1995

Billions of dollars and percentage

Importing country group	Total imports (billions of dollars)			Primary commodities											
				Food			Agricultural raw materials			Fuels			Ores and metals		
	1980	1990	1995	1980	1990	1995	1980	1990	1995	1980	1990	1995	1980	1990	1995
World (billions of dollars)	2027.6	3422.0	4991.2	196.0	296.5	408.9	93.4	127.7	177.7	492.5	364.0	358.7	43.4	50.0	62.8
World *(percentage share)*				(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)
Developed economies	1315.3	2388.8	3240.6	61.0	71.0	68.2	65.9	66.7	61.6	72.4	61.3	61.4	71.4	71.0	63.7
Economies in transition[a]	159.0	171.4	205.0	10.2	6.0	6.2	7.8	5.9	3.6	4.3	8.0	6.6	8.9	6.3	4.8
Developing countries	496.5	801.7	1455.6	26.0	22.5	24.4	24.5	26.9	34.3	17.4	23.5	24.6	11.1	22.3	26.2
Latin America	123.1	137.0	251.1	6.0	4.1	4.8	3.9	3.9	4.8	6.0	4.4	5.3	2.8	3.6	3.9
Africa	95.3	93.8	115.5	6.0	4.2	3.7	3.4	3.2	3.2	1.5	1.4	1.5	1.8	2.2	1.5
Western Asia	103.9	132.1	164.9	6.1	5.3	4.3	2.8	3.2	4.4	2.2	5.2	2.7	1.0	3.2	3.2
Eastern and Southern Asia	151.9	378.9	760.4	6.4	7.5	9.5	11.0	13.4	16.1	7.5	11.1	12.8	4.9	11.5	13.2
Other Asia[b]	22.4	60.0	163.7	1.6	1.3	2.1	3.5	3.1	5.8	0.1	1.3	2.2	0.6	1.9	4.4

Importing country group	Manufactures														
	Textiles			Chemicals			Machinery and transport			Metals			Other		
	1980	1990	1995	1980	1990	1995	1980	1990	1995	1980	1990	1995	1980	1990	1995
World (billions of dollars)	94.4	221.9	323.4	138.5	303.5	471.0	505.6	1208.7	1922.9	124.3	185.5	261.3	339.2	664.2	1004.6
World *(percentage share)*	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)
Developed economies	69.4	71.0	63.8	62.8	67.6	63.5	58.4	71.2	65.0	63.8	68.1	61.0	64.7	72.9	67.5
Economies in transition[a]	6.7	5.1	5.1	8.1	5.3	4.4	8.7	4.3	3.1	9.4	5.7	4.4	9.8	3.5	3.8
Developing countries	23.1	23.6	30.9	28.2	26.2	31.0	32.2	23.9	31.5	24.5	25.7	33.4	23.0	20.4	25.1
Latin America	3.7	2.7	4.3	8.0	5.0	5.9	7.9	4.4	5.6	5.3	3.2	3.3	4.7	3.4	4.3
Africa	5.0	2.4	2.6	5.5	3.1	2.5	7.6	3.0	2.3	3.9	2.5	2.0	4.8	2.2	1.9
Western Asia	6.0	3.5	3.9	4.5	3.7	3.2	7.2	3.3	2.8	5.4	5.0	3.9	6.8	3.6	3.6
Eastern and Southern Asia	7.4	12.2	15.1	8.7	12.0	15.1	8.2	11.7	17.6	7.9	12.4	18.4	5.8	9.9	13.2
Other Asia[b]	1.1	2.8	4.8	1.5	2.5	4.3	1.3	1.6	3.2	2.0	2.6	5.8	0.9	1.4	2.1

Source: United Nations Statistics Division.

[a] Data for 1995 include trade flows between the States of the former USSR. Prior to 1992, these flows were considered internal.
[b] Including China, Democratic People's Republic of Korea, Mongolia and Viet Nam; China accounts for more than 90 per cent of amounts shown.

Table A.19.
WORLD TRADE: CHANGES IN VALUE AND VOLUME OF EXPORTS AND IMPORTS, BY MAJOR COUNTRY GROUP, 1987-1997

Annual percentage change

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996[a]	1997[b]
Dollar value of exports											
WorldWorld	17.7	13.7	8.3	14.5	2.5	7.2	-0.5	13.6	19.6	4.1	4
Developed economies	16.6	14.4	7.1	15.3	2.0	5.9	-2.7	12.6	18.6	2.7	1
of which:											
North America	11.0	24.8	10.5	7.3	5.3	6.1	4.7	11.2	14.6	6.4	7 1/2
Western Europe	20.1	10.8	6.7	20.7	-0.5	5.6	-7.3	13.9	21.9	3.1	-2
Japan	9.7	14.5	3.4	5.0	9.5	8.0	6.6	9.6	11.6	-7.3	1 3/4
Economies in transition	4.1	-0.8	-1.5	-4.1	-14.6	6.1	5.0	17.1	29.1	5.1	6 1/2
Central and Eastern Europe[c]	2.8	0.5	-3.2	-3.2	-8.7	-1.0	11.7	15.6	33.4	1.7	9 1/2
Former Soviet Union/CIS[d]	5.7	-2.2	0.4	-5.1	-21.0	15.2	-2.3	19.0	23.8	9.6	1 3/4
Developing countries	24.5	14.4	13.5	14.8	5.8	10.8	4.6	15.6	21.0	7.4	10
Latin America and the Caribbean	14.8	16.0	11.0	10.1	0.6	6.7	9.4	16.4	20.9	10.2	10 1/2
Africa	12.6	-0.2	10.8	24.3	-2.7	1.7	-7.1	2.1	15.8	8.8	1
Western Asia	27.1	-2.6	23.7	24.0	-9.6	9.3	-12.0	5.5	22.8	12.6	12 1/2
Eastern and Southern Asia	30.9	23.9	12.3	10.5	14.0	13.2	10.2	17.0	21.0	6.5	10
China	27.5	20.5	10.6	18.2	15.8	18.1	7.1	33.1	22.9	1.5	14
Memo items:											
Fuel exporters	20.4	-2.3	22.7	28.3	-5.9	5.0	-8.0	5.5	22.6	14.8	11
Non fuel exporters	25.9	21.4	10.2	9.4	10.8	12.5	8.4	18.5	21.2	5.2	9 3/4
Dollar value of imports											
World	16.9	14.1	8.1	14.3	3.7	6.6	-1.6	13.3	18.5	4.5	4 1/4
Developed economies	18.2	13.0	8.3	14.9	0.7	4.4	-5.9	13.5	17.6	3.0	1 1/4
of which:											
North America	10.5	10.7	7.1	4.5	-1.1	7.9	8.7	13.7	11.3	5.7	7 1/2
Western Europe	22.2	12.4	7.8	20.8	1.5	3.9	-13.2	13.1	20.2	1.4	-1 1/2
Japan	18.4	24.1	11.9	12.2	0.7	-1.6	3.6	13.9	22.0	3.9	-2 1/4
Economies in transition	0.6	-2.5	2.4	7.4	0.8	-11.0	-4.4	12.5	34.5	12.1	9
Central and Eastern Europe[c]	0.6	-2.7	-2.2	3.2	1.8	7.7	9.7	13.4	40.1	12.2	10
Former Soviet Union/CIS[d]	0.5	-2.2	7.8	12.1	-0.2	-30.0	-26.5	10.2	20.9	11.8	6
Developing countries	16.1	20.9	8.5	13.3	13.2	14.5	9.0	13.0	18.7	7.1	10
Latin America and the Caribbean	13.6	16.4	8.5	13.0	17.8	22.2	11.6	18.6	11.6	9.7	13 3/4
Africa	2.8	14.0	1.4	11.7	-2.0	10.0	-4.8	7.1	21.8	6.0	5
Western Asia	9.9	3.8	-5.0	17.1	15.7	14.5	1.5	-8.5	4.2	6.7	7
Eastern and Southern Asia	28.6	30.2	15.1	16.7	13.9	11.7	10.1	18.2	24.5	7.0	9 1/2
China	0.7	27.9	7.0	-9.8	19.6	26.3	27.9	12.2	11.6	5.1	13 1/2
Memo items:											
Fuel exporters	2.8	12.1	-2.0	14.9	18.5	15.7	-1.9	2.8	2.2	10.8	11 1/2
Non fuel exporters	21.5	23.3	11.6	12.8	11.9	14.3	11.8	15.6	22.6	6.6	9 1/2

Table A.19 (continued)

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996[a]	1997[b]
Volume of Exports											
World	5.4	8.2	7.1	4.7	♦ 4.0	5.4	2.9	10.4	10.0	4.6	7 3/4
Developed economies	4.4	8.1	7.0	4.9	3.3	4.0	1.4	9.6	7.4	4.2	6 1/2
of which:											
North America	8.2	15.8	7.8	6.6	5.0	6.8	4.8	10.0	9.4	5.7	6 3/4
Western Europe	4.1	6.2	7.4	4.2	2.4	3.4	0.8	11.3	7.4	4.0	6 1/2
Japan	0.4	5.9	4.3	5.3	2.5	1.5	-2.4	1.7	3.3	0.8	5
Economies in transition	2.6	4.6	-1.4	-9.7	..	..	..	..	..	..	..
Central and Eastern Europe[c]	1.7	4.3	-2.9	-6.2	♦ -9.3	-0.1	♦ 11.7	-0.4	19.6	0.6	2 3/4
Former Soviet Union/CIS[d]	3.4	4.9	0.1	-13.0	..	..	..	..	..	..	..
Developing countries	9.9	9.3	9.4	7.0	10.9	9.5	7.0	13.5	16.2	6.1	11
Latin America and the Caribbean	7.1	7.5	4.6	5.1	4.7	6.3	10.3	9.2	9.9	9.3	11
Africa	-5.5	2.7	6.8	6.8	2.5	-0.1	2.7	4.3	8.3	8.1	6 1/4
Western Asia	2.5	5.1	9.6	4.3	2.5	10.2	-4.6	7.1	16.9	7.3	15 1/2
Eastern and Southern Asia	18.3	13.0	11.6	7.5	16.0	11.1	10.1	14.8	18.0	5.8	10 1/4
China	14.0	10.0	8.8	14.3	18.4	15.8	6.8	31.0	20.7	0.7	14 1/4
Memo items:											
Fuel exporters	7.3	1.7	12.3	11.7	6.1	7.0	-2.4	5.4	16.3	10.1	13
Non fuel exporters	15.1	9.2	9.6	7.0	13.0	10.6	8.4	15.0	18.1	5.3	10
Volume of imports											
World	6.0	7.8	6.8	4.6	♦ 5.3	5.4	3.9	10.3	8.0	6.2	8
Developed economies	6.5	7.3	7.1	4.6	2.6	4.4	0.6	11.0	7.6	5.2	5 1/2
of which:											
North America	3.9	5.1	4.3	1.3	-0.9	7.9	9.6	12.9	7.8	5.3	8
Western Europe	7.7	6.9	7.9	6.4	4.3	3.4	-4.5	9.1	6.7	5.3	4 1/2
Japan	9.3	17.9	7.9	5.7	4.0	-0.4	2.9	13.6	12.5	3.5	3/4
Economies in transition	2.2	-1.3	2.7	0.9	..	..	..	..	..	..	..
Central and Eastern Europe[c]	3.4	3.3	0.2	-8.8	♦ 2.4	5.8	♦ 9.9	12.3	13.9	13.6	11
Former Soviet Union/CIS[d]	1.1	-5.8	5.3	10.6	..	..	..	..	..	..	..
Developing countries	4.9	11.9	7.5	4.6	15.5	12.2	15.0	9.7	8.6	8.1	14
Latin America and the Caribbean	8.7	9.6	4.9	9.4	20.8	22.5	10.8	14.4	4.2	8.4	18 1/4
Africa	-6.8	6.0	-0.5	2.7	-3.7	2.8	2.2	5.8	8.0	6.5	7 1/2
Western Asia	-0.9	-3.7	-5.4	7.2	18.8	12.4	7.6	-11.7	-4.4	7.8	11
Eastern and Southern Asia	14.6	20.4	14.8	6.6	17.0	9.7	17.5	14.7	13.8	8.5	13 3/4
China	-9.5	15.5	7.7	-16.1	21.5	23.2	36.4	9.1	1.6	7.3	18
Memo items:											
Fuel exporters	-6.3	1.7	-1.5	6.9	21.0	13.3	3.7	-1.3	-6.3	12.7	15 3/4
Non fuel exporters	8.4	13.9	11.1	3.1	15.1	12.2	19.3	12.2	12.1	8.0	14

Source: United Nations, based on data of United Nations Statistics Division, ECE, ECLAC and IMF.

♦ Indicates break in the series.
a Preliminary estimates.
b Forecast.
c As of 1993, transactions between the Czech Republic and Slovakia are recorded as foreign trade.
d CIS countries since 1992.

Table A.20.
WORLD TRADE: CHANGES IN PRICES OF EXPORTS AND IMPORTS AND TERMS OF TRADE, BY MAJOR COUNTRY GROUP, 1987-1997

Annual percentage change in dollar-based indices

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996[a]	1997[b]
Unit value of exports											
World	11.4	5.4	0.9	9.1	• -1.7	1.7	-3.3	3.1	8.8	-0.6	-3 1/2
Developed economies	11.6	5.9	0.1	9.9	-1.2	1.9	-4.2	2.8	10.4	-1.5	-5 1/4
of which:											
North America	2.5	7.7	2.5	0.7	0.3	-0.6	-0.1	1.1	4.7	0.7	3/4
Western Europe	15.2	4.4	-0.6	15.7	-2.8	2.1	-8.0	2.4	13.4	-0.8	-8
Japan	9.4	8.1	-0.8	-0.3	6.8	6.4	9.2	7.8	8.0	-8.0	-3 1/4
Economies in transition	1.5	-5.0	-0.1	5.9	..	..	..	..	..	..	..
Central and Eastern Europe[c]	1.0	-3.6	-0.4	3.2	• 0.7	-0.9	• -0.1	16.1	11.5	1.1	6 1/2
Former Soviet Union/CIS[d]	2.2	-6.7	0.4	9.1	..	..	..	..	..	..	..
Developing countries	13.4	5.8	3.3	7.0	-4.0	1.4	-1.5	2.3	4.1	1.0	-3/4
Latin America and the Caribbean	7.2	7.9	6.1	4.8	-3.9	0.3	-0.8	6.6	10.0	0.8	-1/4
Africa	19.2	-2.8	3.7	16.4	-5.1	1.8	-9.6	-2.1	6.9	0.7	-5
Western Asia	24.0	-7.3	12.9	19.0	-11.9	-0.8	-7.7	-1.5	5.0	4.9	-2 3/4
Eastern and Southern Asia	10.6	9.6	0.6	2.8	-1.8	1.9	0.1	2.0	2.5	0.7	-1/4
China	11.8	9.5	1.6	3.4	-2.2	2.0	0.3	1.6	1.9	0.8	-1/4
Memo items											
Fuel exporters	12.2	-4.0	9.3	14.9	-11.3	-1.8	-5.7	0.1	5.5	4.2	-2
Non fuel exporters	9.4	11.1	0.6	2.2	-1.9	1.7	-0.0	3.1	2.6	-0.0	-0
Unit value of imports											
World	10.2	5.7	1.0	9.4	• -1.6	0.6	-6.0	2.5	9.6	-1.6	-3 3/4
Developed economies	10.9	5.4	1.1	9.9	-1.8	0.0	-6.4	2.3	9.3	-2.0	-4
of which:											
North America	6.3	5.4	2.6	3.1	-0.2	0.0	-0.9	0.8	3.2	0.5	-1/2
Western Europe	13.4	5.3	-0.1	13.5	-2.6	0.5	-9.2	3.6	12.7	-3.8	-5 3/4
Japan	8.3	5.3	3.7	6.2	-3.2	-1.1	0.6	0.3	8.5	0.4	-3
Economies in transition	-1.8	-1.5	0.2	7.2	..	..	..	..	..	..	..
Central and Eastern Europe[c]	-2.7	-5.8	-2.3	13.2	• -0.5	1.8	• -0.2	1.0	23.0	-1.2	-1
Former Soviet Union/CIS[d]	-0.6	3.8	2.4	1.3	..	..	..	..	..	..	..
Developing countries:	10.4	8.0	0.8	8.3	-2.1	2.1	-5.3	3.0	9.3	-0.9	-3 3/4
Latin America and the Caribbean	4.5	6.2	3.4	3.3	-2.5	-0.3	0.7	3.7	7.1	1.2	-3 3/4
Africa	10.2	7.6	1.9	8.7	1.7	7.0	-6.9	1.2	12.8	-0.6	-2 1/4
Western Asia	10.9	7.8	0.5	9.2	-2.6	1.9	-5.6	3.6	9.0	-1.0	-3 3/4
Eastern and Southern Asia	12.2	8.1	0.2	9.5	-2.7	1.8	-6.3	3.1	9.4	-1.3	-3 3/4
China	11.3	10.7	-0.7	7.4	-1.6	2.5	-6.2	2.9	9.9	-2.1	-3 3/4
Memo items											
Fuel exporters	9.7	10.3	-0.5	7.4	-2.1	2.1	-5.4	4.1	9.0	-1.7	-3 3/4
Non fuel exporters	12.1	8.2	0.4	9.4	-2.8	1.9	-6.3	3.1	9.4	-1.3	-3 3/4

Table A.20 (continued)

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996a	1997[b]
Terms of trade											
Developed economies	0.6	0.5	-1.0	0.0	◆ 0.6	1.9	2.4	0.5	1.0	0.6	-1 1/4
of which:											
North America	-3.6	2.2	-0.2	-2.3	0.5	-0.6	0.8	0.3	1.4	0.2	1 1/4
Western Europe	1.6	-0.8	-0.5	2.0	-0.2	1.5	1.4	-1.1	0.6	3.0	-2 1/4
Japan	1.0	2.7	-4.4	-6.1	10.3	7.6	8.6	7.5	-0.5	-8.4	-
Economies in transition	3.4	-3.6	-0.2	-1.2	..	..	..	..	..	..	..
Central and Eastern Europe[c]	3.8	2.4	2.0	-8.8	◆ 1.2	-2.7	◆ 0.1	14.9	-9.3	2.3	7 1/2
Former Soviet Union/CIS[d]	2.8	-10.2	-2.0	7.7	..	..	..	..	..	..	..
Developing countries:	2.8	-2.0	2.4	-1.2	-2.0	-0.7	4.1	-0.7	-4.7	1.9	3
Latin America and the Caribbean	2.6	1.6	2.6	1.5	-1.4	0.6	-1.5	2.8	2.7	-0.4	3 1/2
Africa	8.1	-9.7	1.8	7.1	-6.7	-4.9	-2.9	-3.3	-5.3	1.2	-2 1/2
Western Asia	11.8	-14.0	12.3	8.9	-9.5	-2.6	-2.2	-4.9	-3.7	6.0	-1
Eastern and Southern Asia	-1.5	1.3	0.4	-6.1	0.9	0.0	6.8	-1.0	-6.3	2.0	3 3/4
China	0.4	-1.1	2.3	-3.7	-0.6	-0.5	7.0	-1.3	-7.3	2.9	3 3/4
Memo items:											
Fuel exporters	2.3	-12.9	9.8	6.9	-9.3	-3.8	-0.3	-3.8	-3.3	6.1	2
Non fuel exporters	-2.3	2.7	0.2	-6.6	0.9	-0.1	6.7	-0.0	-6.2	1.3	3 3/4

Source: United Nations based on data of United Nations Statistics Division, ECE, ECLAC and IMF.

◆ Indicates break in the series.
a Preliminary estimates.
b Forecast.
c As of 1993, transactions between the Czech Republic and Slovakia are recorded as foreign trade.
d CIS countries since 1992.

Table A.21.
INTERNATIONAL PRICES OF NON-FUEL PRIMARY COMMODITIES EXPORTED BY DEVELOPING COUNTRIES, 1986-1996

Annual percentage change[a]

		Food	Tropical beverages	Vegetable oil-seeds and oils	Agricultural raw materials	Minerals and metals	Combined index		Prices of manufactures[b]	Real prices of commodities[c]	Memo item: crude petroleum[d]
							Dollar	SDR			
1986		10.0	24.0	-38.0	2.0	-5.0	4.0	-10.0	19.8	-13.2	-49.9
1987		6.4	-34.7	17.7	16.7	18.9	2.9	-6.7	12.6	-8.7	31.0
1988		29.9	1.2	31.5	8.4	45.1	26.2	21.4	8.2	16.6	-19.7
1989		5.9	-14.6	-11.5	0.0	0.0	0.0	4.9	-1.1	1.1	21.6
1990		-6.2	-11.4	-12.9	4.7	-9.8	-5.9	-11.2	9.9	-14.4	28.6
1991		-6.6	-8.1	8.1	-0.7	-9.5	-6.3	-7.4	0.0	-6.3	-16.4
1992		-2.1	-14.0	7.5	-3.7	-3.7	-3.4	-5.7	3.0	-6.2	-1.0
1993		0.7	6.1	0.0	-6.2	-14.7	-3.5	-2.4	-5.8	2.5	-11.4
1994		10.1	75.0	24.4	15.7	13.6	18.0	14.8	2.1	15.6	-4.9
1995		5.9	1.1	10.3	15.0	20.0	9.9	3.2	9.1	0.8	8.8
1996		6.8	-15.2	-4.2	-9.9	-12.7	-4.2	1.0	-1.9	-2.4	20.1
1995	I	-0.4	73.3	24.1	29.4	39.4	21.3	12.8	10.3	9.9	25.4
	II	2.9	28.6	13.1	24.1	25.3	15.6	4.5	12.2	3.0	14.2
	III	10.8	-27.8	9.6	3.9	19.5	5.9	2.1	5.9	0.0	-4.1
	IV	9.3	-26.7	-2.4	5.4	1.9	1.4	0.0	6.9	-5.1	2.9
1996	I	13.3	-22.6	-7.2	-9.6	-8.1	-1.6	2.7	-0.9	-0.7	8.2
	II	14.4	-18.2	1.2	-14.3	-7.3	-0.7	7.2	-3.6	3.0	7.7
	III	4.5	-14.3	-4.8	-6.9	-20.3	-6.0	-1.4	-2.8	-3.3	27.1
	IV	-3.6	-5.1	-7.0	-10.2	-15.0	-7.5	-4.5	-2.8	-4.8	37.8

Sources : UNCTAD, *Monthly Commodity Price Bulletin*; United Nations, *Monthly Bulletin of Statistics*; and *OPEC Bulletin*.

a For quarterly data, quarter shown is compared with same quarter of previous year.
b Index of developed countries manufactured export prices (1980 base year until 1987 and 1990 base year thereafter).
c Combined index of dollar commodity prices deflated by manufactured export price index.
d OPEC basket of seven crude oils.

III. INTERNATIONAL FINANCE AND FINANCIAL MARKETS

Table A.22.
WORLD BALANCE OF PAYMENTS ON CURRENT ACCOUNT, BY COUNTRY GROUP, 1986-1996[a]

Billions of dollars

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996[b]
Developed economies	-2.9	-28.8	-21.4	-41.8	-57.3	-7.7	22.1	97.6	71.5	81.5	74.5
Major developed economies	1.8	-23.5	-14.8	-21.2	-33.6	5.6	33.0	67.2	36.3	39.3	10.1
of which:											
Germany[c]	48.6	57.1	63.0	69.9	64.0	12.1	5.7	12.4	8.4	8.8	7.1
Japan	87.0	88.6	81.7	59.8	39.9	79.0	114.4	134.8	133.4	114.6	68.0
United States	-136.4	-153.8	-114.5	-90.7	-73.7	-29.7	-42.7	-79.5	-128.5	-134.3	-147.2
Other industrialized countries	-4.7	-5.3	-6.5	-20.6	-23.7	-13.3	-10.9	30.3	35.2	42.2	64.5
Developing countries	-48.0	-10.1	-28.9	-22.6	-0.1	-71.8	-79.4	-110.0	-80.3	-92.4	-86.9
Net-creditor countries	17.4	21.8	14.5	21.6	34.7	-1.8	2.9	-2.2	10.3	23.7	36.0
New-debtor countries	-65.4	-31.9	-43.4	-44.1	-34.9	-70.0	-82.3	-107.8	-90.6	-116.1	-122.8
Net fuel exporters	-28.2	-5.6	-24.8	-6.1	22.6	-44.0	-47.8	-51.2	-45.4	-10.0	5.2
Net fuel importers	-19.8	-4.4	-4.1	-16.4	-22.7	-27.9	-31.6	-58.8	-34.9	-82.5	-92.1
Four exporters of manufactures	45.9	89.1	74.7	85.6	97.5	11.9	13.3	16.4	16.1	9.8	2.4
Other	-65.6	-93.6	-78.8	-102.0	-120.2	-39.8	-45.0	-75.1	-51.0	-92.2	-94.5
Economies in transition[d]	4.0	8.9	6.3	-0.5	-13.6	♦-5.7	♦-6.5	♦-5.9	-7.5	5.6	-3.6
Central and Eastern Europe[e]	0.2	0.4	0.9	-2.1	-6.5	♦-3.8	-2.1	♦-9.1	-4.6	0.5	-11.3
Former Soviet Union/CIS	2.7	7.3	2.9	-0.8	-4.8	-0.8	♦-5.5	2.9	-2.9	9.3	10.0
World residual[f]	46.9	29.9	44.0	64.8	71.1	85.3	64.4	18.9	16.9	5.3	16.0
of which:											
Trade residual (imports, f.o.b.)	-18.4	-38.8	-44.1	-27.4	-35.4	-38.3	-44.9	-96.5	-115.6	-138.6	-100.8
Services and private transfers	65.3	68.7	88.1	92.2	106.5	123.6	109.2	115.4	132.5	143.9	116.7

Source: United Nations, based on data of IMF and other national and international sources.

♦ Indicates break in series.
a Balance on goods, services and private transfers.
b Preliminary estimate.
c Including transactions of the eastern *Länder* (States) as from July 1990.
d Balance in convertible currencies; total includes the former German Democratic Republic until 1990.
e Comprises Bulgaria, the former Czechoslovakia until 1992, Czech Republic, Hungary, Poland, Romania and Slovakia, and until July 1990, the former German Democratic Republic.
f Unreported trade, services and private transfers, as well as errors and timing asymmetries in reported data.

Table A.23.
CURRENT ACCOUNT TRANSACTIONS: DEVELOPED ECONOMIES, 1986-1996[a]

Billions of dollars

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996[b]
All developed economies											
Goods: exports (f.o.b.)	1470.4	1718.7	1976.8	2118.9	2435.9	2479.5	2636.4	2547.4	2860.1	3404.4	3529.6
Goods: imports (f.o.b.)	-1480.8	-1748.2	-1985.4	-2153.0	-2473.6	-2478.1	-2598.6	-2446.6	-2764.1	-3279.5	-3430.8
Trade balance	-10.4	-29.5	-8.6	-34.1	-37.7	1.4	37.8	100.8	96.0	124.9	98.9
Net services and private transfers	7.5	0.7	-12.8	-7.7	-19.6	-9.2	-15.7	-3.2	-24.5	-43.3	-24.3
of which:											
Net dividends and interest[c]	-15.9	-24.4	-21.1	-25.6	-54.9	-57.3	-58.4	-50.7	-66.5	-76.3	-79.1
Current account balance	-2.9	-28.8	-21.4	-41.8	-57.3	-7.7	22.1	97.6	71.5	81.5	74.5
Major industrialized countries											
Goods: exports (f.o.b.)	1083.7	1253.9	1449.9	1558.1	1770.0	1815.7	1929.2	1888.3	2107.2	2462.3	2527.4
Goods: imports (f.o.b.)	-1083.9	-1266.8	-1443.8	-1567.6	-1782.7	-1798.4	-1884.2	-1810.3	-2037.2	-2376.7	-2488.7
Trade balance	-0.2	-12.9	6.1	-9.5	-12.7	17.4	45.0	78.0	70.0	85.6	38.6
Net services and private transfers	2.0	-10.7	-20.9	-11.7	-20.9	-11.8	-12.0	-10.8	-33.8	-46.2	-28.6
of which:											
Net dividends and interest[c]	-1.2	-7.0	2.2	-1.0	-24.6	-27.7	-18.5	-25.2	-38.2	-48.5	-49.0
Current account balance	1.8	-23.5	-14.8	-21.2	-33.6	5.6	33.0	67.2	36.3	39.3	10.1
of which:											
Germany[d]											
Goods: exports (f.o.b.)	241.5	291.5	322.8	340.0	410.9	403.4	430.2	382.5	430.3	521.2	521.0
Goods: imports (f.o.b.)	-186.8	-223.4	-245.3	-264.7	-341.9	-383.4	-401.5	-340.7	-378.6	-456.9	-455.2
Trade balance	54.7	68.0	77.5	75.3	69.0	19.9	28.7	41.8	51.7	64.3	65.8
Net services and private transfers	-6.0	-10.9	-14.5	-5.4	-5.0	-7.8	-23.0	-29.4	-43.3	-55.5	-58.6
of which:											
Net dividends and interest[c]	2.7	3.9	3.6	11.1	13.6	17.6	15.9	12.9	1.6	-0.2	-10.5
Current account balance	48.6	57.1	63.0	69.9	64.0	12.1	5.7	12.4	8.4	8.8	7.1
Japan											
Goods: exports (f.o.b.)	205.6	224.6	259.8	269.5	280.3	308.1	332.5	352.9	386.0	429.3	400.3
Goods: imports (f.o.b.)	-112.8	-128.2	-164.8	-192.7	-216.8	-212.0	-207.8	-213.3	-241.5	-297.2	-316.6
Trade balance	92.8	96.4	95.0	76.9	63.6	96.1	124.7	139.6	144.4	132.1	83.7
Net services and private transfers	-5.8	-7.8	-13.3	-17.1	-23.7	-17.1	-10.3	-4.8	-11.1	-17.5	-15.7
of which:											
Net dividends and interest[c]	9.5	16.7	21.0	23.4	23.2	26.7	36.2	41.4	41.0	45.1	52.0
Current account balance	87.0	88.6	81.7	59.8	39.9	79.0	114.4	134.8	133.4	114.6	68.0
United States											
Goods: exports (f.o.b.)	223.4	250.2	320.2	362.2	389.3	416.9	440.3	458.7	504.5	577.8	613.0
Goods: imports (f.o.b.)	-368.4	-409.8	-447.2	-477.3	-498.3	-491.0	-536.4	-590.1	-669.1	-749.8	-799.6
Trade balance	-145.1	-159.6	-127.0	-115.1	-109.0	-74.1	-96.1	-131.4	-164.6	-172.0	-186.6
Net services and private transfers	8.7	5.7	12.5	24.4	35.3	44.4	53.4	51.9	36.1	37.7	39.5
of which:											
Net dividends and interest[c]	3.1	-8.0	2.4	-6.7	-14.2	-20.7	-18.5	-30.4	-33.1	-49.2	-48.8
Current account balance	-136.4	-153.8	-114.5	-90.7	-73.7	-29.7	-42.7	-79.5	-128.5	-134.3	-147.2
Other industrialized countries											
Goods: exports (f.o.b.)	386.8	464.8	526.9	560.8	665.9	663.8	707.1	659.0	752.9	942.1	1002.2
Goods: imports (f.o.b.)	-396.9	-481.4	-541.6	-585.4	-690.9	-679.7	-714.4	-636.3	-726.8	-902.8	-942.0
Trade balance	-10.1	-16.7	-14.7	-24.6	-25.0	-15.9	-7.2	22.8	26.0	39.3	60.2
Net services and private transfers	5.5	11.4	8.1	4.0	1.3	2.6	-3.7	7.6	9.2	2.9	4.2
of which:											
Net dividends and interest[c]	-14.7	-17.4	-23.3	-24.6	-30.3	-29.5	-39.8	-25.5	-28.3	-27.7	-30.1
Current account balance	-4.7	-5.3	-6.5	-20.6	-23.7	-13.3	-10.9	30.3	35.2	42.2	64.5

Source: United Nations, based on data of IMF, World Trade Organization and national sources.

a Balance on goods, services and private transfers.
b Preliminary estimates.
c Differs from net investment in excluding returned earnings of direct investment.
d Including external transactions of the eastern *Länder* (States) as from July 1990.

Table A.24.

CURRENT ACCOUNT TRANSACTIONS: ECONOMIES IN TRANSITION, 1986-1996[a]

Billions of dollars

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996[b]
Economies in transition[c]											
Goods: exports (f.o.b.)	69.4	77.1	83.5	87.6	89.7	♦ 90.8	♦ 108.4	♦110.0	129.2	180.1	191.4
Goods: imports (f.o.b.)	-63.8	-66.7	-75.1	-86.5	-100.7	♦-90.6	♦-101.7	♦ -99.9	-114.3	-172.7	-190.6
Trade balance	5.6	10.4	8.4	1.1	-11.0	♦ 0.2	♦ 6.7	♦ 10.1	14.9	9.4	0.8
Net services and private transfers	-1.6	-1.4	-2.1	-1.6	-2.7	♦ -5.9	♦ -13.2	♦-16.0	-22.4	-1.8	-4.4
Current account balance	4.0	8.9	6.3	-0.5	-13.6	♦ -5.7	♦ -6.5	♦ -5.9	-7.5	5.6	-3.6
Central and Eastern Europe[d]											
Goods: exports (f.o.b.)	31.5	34.3	37.4	38.8	41.8	♦39.3	43.4	♦ 43.7	55.7	78.9	82.6
Goods: imports (f.o.b.)	-28.8	-32.2	-34.4	-37.6	-48.4	♦-42.0	-47.4	♦-52.6	-61.1	-88.3	-102.8
Trade balance	2.7	2.1	2.9	1.2	-6.6	♦ -2.7	-4.0	♦ -8.9	-5.4	-9.4	-20.2
Net services and private transfers	-2.5	-1.7	-2.0	-3.3	0.1	♦ -1.1	1.9	♦ -0.2	-0.8	9.9	8.9
Current account balance	0.2	0.4	0.9	-2.1	-6.5	♦ -3.8	-2.1	♦ -9.1	-4.6	0.5	-11.3
of which:											
Former Czechoslovakia											
Goods: exports (f.o.b.)	4.3	4.5	5.0	5.4	5.9	8.3	11.3				
Goods: imports (f.o.b.)	-4.1	-4.6	-5.1	-5.0	-6.8	-8.8	-12.9				
Trade balance	0.2	-0.1	-0.1	0.4	-0.9	-0.5	-1.6				
Net services and private transfers	0.2	0.2	0.2	-0.1	0.7	0.0	2.2				
Current account balance	0.4	0.1	0.1	0.3	-0.2	-0.5	0.6				
Czech Republic											
Goods: exports (f.o.b.)								10.4	14.0	21.5	21.7
Goods: imports (f.o.b.)								-10.6	-14.9	-25.1	-27.7
Trade balance								-0.2	-0.9	-3.6	-6.0
Net services and private transfers								0.0	0.8	2.2	1.5
Current account balance								-0.2	-0.1	-1.4	-4.5
Slovakia											
Goods: exports (f.o.b.)								3.1	6.7	8.5	9.0
Goods: imports (f.o.b.)								-3.3	-6.6	-8.5	-11.2
Trade balance								-0.2	0.1	0.0	-2.2
Net services and private transfers								-0.2	0.6	0.6	0.8
Current account balance								-0.4	0.7	0.6	-1.4
Hungary											
Goods: exports (f.o.b.)	4.2	5.0	5.5	6.4	6.3	9.3	10.0	8.1	7.6	12.8	14.2
Goods: imports (f.o.b.)	-4.7	-5.0	-5.0	-5.9	-6.0	-9.1	-10.1	-11.3	-11.2	-15.3	-16.8
Trade balance	-0.5	-0.0	0.5	0.5	0.3	0.2	-0.1	-3.2	-3.6	-2.5	-2.6
Net services and private transfers	-1.0	-0.9	-1.3	-1.9	-0.2	0.0	0.4	-0.2	-0.3	0.0	0.9
Current account balance	-1.5	-0.9	-0.8	-1.4	0.1	0.2	0.3	-3.4	-3.9	-2.5	-1.7
Poland											
Goods: exports (f.o.b.)	6.2	6.9	7.9	8.3	11.3	13.8	13.9	13.6	17.0	22.9	24.4
Goods: imports (f.o.b.)	-5.1	-5.9	-7.0	-8.4	-9.9	-14.6	-14.0	-16.9	-17.8	-24.7	-32.6
Trade balance	1.1	1.0	0.9	-0.1	1.4	-0.8	-0.1	-3.3	-0.8	-1.8	-8.2
Net services and private transfers	-1.7	-1.4	-1.5	-1.7	-2.1	-0.6	-0.2	1.0	-0.1	7.3	6.8
Current account balance	-0.6	-0.4	-0.6	-1.8	-0.7	-1.4	-0.3	-2.3	-0.9	5.5	-1.4
Soviet Union/CIS[e]											
Goods: exports (f.o.b.)	26.8	31.3	33.4	35.2	33.6	37.7	♦ 51.6	52.1	57.0	81.5	88.3
Goods: imports (f.o.b.)	-23.2	-23.1	-28.7	-35.4	-35.3	-35.3	♦-42.1	-32.8	-34.3	-59.4	-59.8
Trade balance	3.6	8.2	4.7	-0.2	-1.7	2.4	♦ 9.5	19.3	22.7	22.1	28.5
Net services and private transfers	-0.9	-0.9	-1.8	-0.6	-3.1	-3.2	♦-15.0	-16.4	-25.6	-12.8	-18.5
Current account balance	2.7	7.3	2.9	-0.8	-4.8	-0.8	♦ 15.5	2.9	-2.9	9.3	10.0

Source: United Nations, based on data of ECE and IMF.

♦ Indicates break in series.

a Balance in convertible currencies on goods, services and private transfers; data excluding trade among members of the former Czechoslovakia and the Commonwealth of Independent States.

b Preliminary estimates.

c Including external transactions of the former German Democratic Republic until July 1990.

d Comprises Bulgaria, the former Czechoslovakia until 1992, Czech Republic, Hungary, Poland, Romania and Slovakia, and until July 1990, the former German Democratic Republic.

e From 1992, data for the Commonwealth of Independent States.

Table A.25.
CURRENT ACCOUNT TRANSACTIONS: DEVELOPING COUNTRIES, 1986-1996[a]

Billions of dollars

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996[b]
All developing countries ***(129 economies)***											
Goods: exports (f.o.b.)	452.5	563.6	649.8	729.9	834.6	877.6	967.3	1034.1	1185.6	1417.5	1517.7
Goods: imports (f.o.b.)	-429.9	-505.6	-604.8	-669.5	-753.2	-846.2	-960.2	-1048.8	-1183.4	-1416.4	-1524.1
Trade balance	22.5	58.0	45.0	60.4	81.4	31.4	7.1	-14.7	2.3	1.0	-6.4
Net services and private transfers of which:	-70.6	-68.0	-73.9	-83.0	-81.5	-103.3	-86.4	-95.3	-82.6	-93.4	-80.5
Net dividends and interest[c]	-39.9	-46.1	-48.3	-50.1	-50.7	-52.9	-44.8	-60.0	-63.1	-75.0	-76.1
Current account balance	-48.0	-10.1	-28.9	-22.6	-0.1	-71.8	-79.4	-110.0	-80.3	-92.4	-86.9
Totals by region											
Latin America											
Goods: exports (f.o.b.)	88.4	101.0	117.1	129.5	143.0	143.6	152.8	166.2	193.1	233.2	257.0
Goods: imports (f.o.b.)	-71.6	-80.5	-93.1	-101.3	-113.7	-132.6	-159.9	-177.9	-210.2	-235.1	-259.7
Trade balance	16.8	20.5	23.9	28.2	29.2	11.0	-7.1	-11.6	-17.1	-1.9	-2.7
Net services and private transfers of which:	-37.8	-33.7	-36.3	-39.3	-34.9	-31.2	-29.1	-34.7	-33.2	-32.7	-32.9
Net dividends and interest[c]	-32.3	-31.3	-34.1	-37.8	-34.2	-30.5	-30.2	-33.1	-33.1	-36.0	-34.8
Current account balance	-20.9	-13.1	-12.3	-11.1	-5.6	-20.2	-36.2	-46.3	-50.2	-34.6	-35.6
Africa											
Goods: exports (f.o.b.)	67.0	76.5	77.3	84.3	105.2	100.5	98.8	92.0	95.4	110.6	120.3
Goods: imports (f.o.b.)	-62.3	-69.3	-77.3	-80.1	-91.1	-91.0	-95.4	-91.9	-97.3	-113.5	-119.1
Trade balance	4.7	7.2	0.0	4.2	14.1	9.4	3.4	0.2	-1.8	-2.9	1.2
Net services and private transfers of which:	-17.1	-17.1	-17.4	-19.1	-20.2	-18.9	-14.2	-13.7	-16.1	-17.6	-15.2
Net dividends and interest[c]	-11.4	-13.9	-14.7	-15.5	-17.3	-16.6	-6.2	-12.7	-11.5	-11.4	-11.5
Current account balance	-12.4	-9.8	-17.4	-14.9	-6.1	-9.4	-10.8	-13.5	-17.9	-20.5	-14.0
Western Asia											
Goods: exports (f.o.b.)	77.4	98.2	100.9	121.1	147.4	134.0	147.1	142.7	153.6	172.9	188.7
Goods: imports (f.o.b.)	-81.4	-90.9	-94.1	-101.8	-115.4	-126.0	-139.8	-140.8	-126.2	-151.1	-156.7
Trade balance	-4.0	7.3	6.8	19.4	32.0	8.0	7.3	1.9	27.3	21.8	32.0
Net services and private transfers of which:	-14.6	-16.1	-17.2	-18.8	-21.5	-48.4	-37.1	-35.0	-36.3	-27.0	-27.8
Net dividends and interest[c]	14.8	11.2	11.8	13.3	10.8	6.7	4.6	1.6	-3.1	-0.0	0.7
Current account balance	-18.5	-8.8	-10.4	0.6	10.5	-40.4	-29.8	-33.1	-9.0	-5.2	4.1
Eastern and Southern Asia											
Goods: exports (f.o.b.)	219.6	287.9	354.6	395.0	439.0	499.6	568.6	633.1	743.5	900.8	951.8
Goods: imports (f.o.b)	-214.7	-264.9	-340.3	-386.4	-433.0	-496.6	-565.1	-638.3	-749.7	-916.8	-988.6
Trade balance	5.0	22.9	14.3	8.6	6.0	3.0	3.5	-5.2	-6.2	-16.0	-36.8
Net services and private transfers of which:	-1.1	-1.2	-3.0	-5.7	-4.9	-4.8	-6.1	-11.9	3.0	-16.2	-4.6
Net dividends and interest[c]	-11.1	-12.1	-11.4	-10.2	-10.0	-12.5	-13.0	-15.7	-15.3	-27.6	-30.6
Current account balance	3.8	21.7	11.3	2.8	1.1	-1.8	-2.6	-17.1	-3.2	-32.1	-41.4

Table A.25 (continued)

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996[b]
Totals by trade grouping											
Net-creditor countries (9 economies)											
Goods: exports (f.o.b.)	112.5	140.1	158.3	182.8	216.8	227.9	248.0	255.9	287.7	339.4	362.0
Goods: imports (f.o.b.)	-83.0	-102.1	-130.2	-141.9	-157.8	-180.8	-206.2	-219.4	-237.8	-281.0	-303.1
Trade balance	29.5	38.0	28.0	41.0	59.0	47.1	41.7	36.5	49.8	58.3	58.9
Net services and private transfers	-12.2	-16.2	-13.5	-19.4	-24.2	-48.9	-38.9	-38.8	-39.5	-34.7	-22.9
of which:											
Net dividends and interest[c]	21.1	18.2	20.6	22.5	21.0	17.5	16.6	11.5	9.1	12.2	12.9
Current account balance	17.4	21.8	14.5	21.6	34.7	-1.8	2.9	-2.2	10.3	23.7	36.0
Net-debtor countries (120 economies)											
Goods: exports (f.o.b.)	339.9	423.5	491.6	547.1	617.8	649.7	719.3	778.1	898.0	1078.1	1155.7
Goods: imports (f.o.b.)	-346.9	-403.5	-474.5	-527.7	-595.4	-665.4	-754.0	-829.4	-945.5	-1135.4	-1221.0
Trade balance	-7.0	20.0	17.0	19.4	22.4	-15.7	-34.7	-51.2	-47.6	-57.3	-65.3
Net services and private transfers	-58.4	-51.8	-60.4	-63.6	-57.3	-54.3	-47.6	-56.5	-43.1	-58.8	-57.6
of which:											
Net dividends and interest[c]	-61.1	-64.4	-68.9	-72.7	-71.7	-70.4	-61.5	-71.5	-72.2	-87.2	-89.1
Current account balance	-65.4	-31.9	-43.4	-44.1	-34.9	-70.0	-82.3	-107.8	-90.6	-116.1	-122.8
Net fuel exporters (26 economies)											
Goods: exports (f.o.b.)	144.7	176.8	178.4	216.7	272.5	256.9	272.2	269.2	291.3	340.7	386.7
Goods: imports (f.o.b.)	-129.8	-138.0	-156.1	-168.6	-189.2	-215.6	-243.0	-243.0	-253.3	-273.3	-306.0
Trade balance	14.9	38.8	22.2	48.2	83.3	41.3	29.1	26.3	38.0	67.3	80.7
Net services and private transfers	-43.1	-44.4	-47.0	-54.3	-60.7	-85.3	-76.9	-77.5	-83.4	-77.3	-75.5
of which:											
Net dividends and interest[c]	-0.6	0.0	-5.9	-8.2	-11.0	-14.7	-16.9	-20.3	-23.0	-22.2	-20.5
Current account balance	-28.2	-5.6	-24.8	-6.1	22.6	-44.0	-47.8	-51.2	-45.4	-10.0	5.2
Net fuel importers (103 economies)											
Goods: exports (f.o.b.)	307.8	386.8	471.5	513.2	562.1	620.7	695.1	764.8	894.3	1076.8	1131.0
Goods: imports (f.o.b.)	-300.1	-367.7	-448.6	-501.0	-564.0	-630.6	-717.2	-805.8	-930.1	-1143.1	-1218.1
Trade balance	7.7	19.2	22.8	12.2	-1.9	-9.9	-22.1	-40.9	-35.7	-66.3	-87.1
Net services and private transfers	-27.4	-23.6	-26.9	-28.7	-20.8	-18.0	-9.5	-17.8	0.8	-16.1	-5.0
of which:											
Net dividends and interest[c]	-39.3	-40.1	-42.5	-42.0	-39.7	-38.2	-27.9	-39.7	-40.1	-52.8	-55.6
Current account balance	-19.8	-4.4	-4.1	-16.4	-22.7	-27.9	-31.6	-58.8	-34.9	-82.5	-92.1
Four exporters of manufacturers (4 economies)											
Goods: exports (f.o.b.)	131.2	177.1	223.8	246.1	266.8	304.6	343.3	377.5	435.1	525.3	550.8
Goods: imports (f.o.b.)	-111.4	-150.3	-199.2	-224.6	-256.1	-298.1	-339.0	-372.0	-435.4	-533.4	-571.3
Trade balance	19.8	26.8	24.6	21.5	10.7	6.6	4.2	5.6	-0.3	-8.1	-20.5
Net services and private transfers	3.5	4.3	5.0	3.7	5.4	5.3	9.1	10.8	16.4	17.9	22.9
of which:											
Net dividends and interest[c]	-0.3	-0.3	1.6	3.3	4.5	4.6	5.4	3.1	3.8	3.4	3.1
Current account balance	23.3	31.1	29.6	25.2	16.1	11.9	13.3	16.4	16.1	9.8	2.4

Source: United Nations, based on data of IMF, and national and other sources.

[a] Balance on goods, services and private transfers.

[b] Preliminary estimate.

[c] Differs from net investment income in excluding retained earnings of direct investment.

Table A.26.

NET TRANSFER OF FINANCIAL RESOURCES OF INDUSTRIALIZED COUNTRIES, 1986-1996

Billions of dollars

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996[a]
United States											
Net capital flow	141.4	157.7	123.9	130.8	105.1	53.8	62.3	114.4	143.5	176.2	167.6
Current grants: private[b]	-4.4	-4.4	-5.5	-5.8	-5.9	-6.6	-6.2	-6.6	-8.6	-9.0	-11.5
Current grants: official[b]	-14.1	-12.7	-13.2	-13.6	-20.5	20.4	-18.6	-20.2	-19.3	-14.0	-18.8
Capital transfers[c]	0.2	0.2	0.2	0.2	0.3	0.3	0.4	-0.2	-0.6	0.1	0.5
Direct investment[d]	26.4	47.3	52.1	51.5	53.0	27.1	4.6	5.0	24.2	5.9	35.4
Portfolio	81.5	61.7	66.0	73.6	-6.8	11.8	22.8	-35.3	79.2	137.2	272.5
Medium and long term loans	-6.9	-1.7	10.8	1.7	18.2	8.0	-3.0	1.7	2.2	0.7	-0.5
Short term capital[e]	26.0	70.3	25.3	-32.7	20.3	19.6	85.4	126.5	52.7	23.7	-56.9
Errors and omissions	32.7	-3.0	-11.7	55.8	46.5	-26.8	-23.1	43.6	13.7	31.5	-53.1
Use of fund credit	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net dividends and interest	3.1	-8.0	2.4	-6.7	-14.2	-20.7	-18.5	-30.4	-33.1	-49.2	-48.8
Net transfer of resources (financial basis)	144.5	149.8	126.2	124.1	91.0	33.2	43.8	84.0	110.4	127.0	118.8
Use of official reserves[f]	0.3	9.2	-3.9	-25.3	-2.2	5.8	3.9	-1.4	5.3	-9.7	8.4
Net transfer of resources (expenditure basis)	144.8	158.9	122.3	98.8	88.7	38.9	47.7	82.6	115.7	117.3	127.2
United Kingdom											
Net capital flow	7.3	29.3	38.5	29.1	35.3	26.7	15.6	18.6	11.9	8.6	24.4
Current grants: private[b]	0.1	-0.2	-0.5	-0.5	-0.5	0.0	0.0	0.0	0.0	0.0	0.0
Current grants: official[b]	-3.3	-5.4	-5.9	-7.0	-8.2	-1.9	-8.6	-7.4	-7.8	-11.3	-7.3
Capital transfers[c]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Direct investment[d]	-3.7	-9.0	-5.3	3.7	24.5	9.7	5.5	-1.4	-3.3	-5.8	6.7
Portfolio	3.6	69.7	32.5	-34.3	-7.7	-40.8	-25.0	-88.4	87.2	-9.0	-46.8
Medium and long term loans	0.2	0.4	-1.8	-3.0	-3.4	-0.9	-1.3	0.1	-1.3	-2.4	0.5
Short term capital[e]	3.5	-22.1	16.6	64.3	27.3	60.3	34.3	119.4	-70.5	30.7	61.6
Errors and omissions	6.9	-4.0	2.7	5.8	3.3	0.5	10.6	-3.6	7.6	6.4	9.8
Use of fund credit	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net dividends and interest	2.0	-0.3	-2.5	-3.0	-9.0	-9.4	-2.8	-5.2	-1.3	-2.3	-0.5
Net transfer of resources (financial basis)	9.3	29.0	36.0	26.1	26.3	17.3	12.7	13.3	10.5	6.3	23.9
Use of official reserves[f]	-4.3	-20.2	-4.9	8.8	-0.1	-4.7	2.4	-1.3	-1.5	0.9	0.8
Net transfer of resources (expenditure basis)	5.0	8.9	31.1	34.9	26.2	12.6	15.2	12.1	9.0	7.2	24.7
Germany[g]											
Net capital flow	-43.4	-37.8	-80.5	-68.8	-54.3	-18.9	27.4	-30.9	-8.9	-3.9	-14.2
Current grants: private[b]	-2.2	-2.3	-2.9	-2.6	-3.5	-3.9	-5.2	-5.4	-5.4	-6.1	-5.7
Current grants: official[b]	-7.7	-10.7	-12.8	-13.2	-15.9	-30.0	-25.1	-25.8	-28.7	-29.6	-25.1
Capital transfers[c]	-0.0	-0.1	-0.0	0.2	0.1	0.5	0.8	0.6	1.0	1.0	0.6
Direct investment[d]	-7.5	-7.8	-10.1	-7.4	-17.1	-17.5	-16.1	-12.6	-9.7	-23.9	-27.1
Portfolio	23.4	3.8	-36.7	-2.2	-1.7	24.3	31.9	119.4	-33.2	26.7	52.0
Medium and long term loans	-4.5	-30.4	-0.7	0.0	-13.8	-15.6	8.7	10.0	4.1	25.1	15.2
Short term capital[e]	-46.4	10.5	-19.2	-48.8	-17.5	16.2	28.2	-100.2	70.7	7.3	-18.7
Errors and omissions	1.5	-0.9	1.7	5.1	15.3	7.1	4.2	-17.0	-7.6	-4.5	-5.5
Use of fund credit	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net dividends and interest	2.7	3.9	3.6	11.1	13.6	17.6	15.9	12.9	1.6	-0.2	-10.5
Net transfer of resources (financial basis)	-42.0	-33.8	-76.9	-57.7	-40.7	-1.3	43.2	-18.1	-7.3	-4.0	-24.6
Use of official reserves[f]	-5.4	-21.5	15.6	-2.9	-7.3	6.2	-37.2	14.2	2.1	-7.2	-1.0
Net transfer of resources (expenditure basis)	-47.5	-55.3	-61.3	-60.6	-48.0	4.9	6.1	-3.9	-5.3	-11.3	-25.6

Table A.26 (continued)

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996[a]
Japan											
Net capital flow	-73.1	-52.8	-67.2	-74.0	-48.0	-86.1	-113.7	-106.7	-108.0	-55.9	-34.9
Current grants: private[b]	-0.9	-2.1	-2.0	-1.5	-1.5	0.0	0.0	0.0	0.0	0.0	-4.5
Current grants: official[b]	-1.2	-1.6	-2.1	-2.8	-4.1	-10.6	-2.1	-2.4	-2.8	-3.3	-2.0
Capital transfers[c]	0.0	0.0	0.0	0.0	0.0	-1.0	-1.3	-1.5	-1.9	-2.3	-2.4
Direct investment[d]	-14.3	-18.4	-34.7	-45.2	-46.3	-30.2	-14.6	-13.7	-17.2	-22.6	-21.7
Portfolio	-101.4	-94.4	-66.1	-28.8	-4.8	45.2	-27.4	-70.7	-26.7	-36.1	-43.5
Medium and long term	-5.8	-24.3	-29.6	-16.0	7.7	0.0	0.0	0.0	0.0	0.0	-28.1
Short term capital[e]	57.9	91.7	64.2	42.1	21.9	-81.5	-57.9	-18.2	-41.7	-5.7	67.9
Errors and omissions	2.5	-3.7	3.1	-21.8	-20.9	-7.9	-10.4	-0.3	-17.8	14.1	-0.7
Use of fund credit	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net dividends and interest	9.5	16.7	21.0	23.4	23.2	26.7	36.2	41.4	41.0	45.1	53.6
Net transfer of resources (financial basis)	-63.6	-36.1	-46.2	-50.6	-24.8	-59.4	-77.5	-65.3	-67.0	-10.8	17.1
Use of official reserves[f]	-14.8	-37.9	-16.5	12.8	6.6	8.3	-0.7	-27.7	-25.4	-58.7	-39.8
Net transfer of resources (expenditure basis)	-78.4	-74.0	-62.7	-37.8	-18.2	-51.1	-78.2	-93.0	-92.4	-69.5	-22.7
Other industrial countries											
Net capital flow	3.9	56.5	57.8	73.9	123.2	57.2	40.2	-39.5	-33.4	-67.8	-17.8
Current grants: private[b]	0.7	1.4	2.1	1.6	0.3	-1.7	-3.0	0.3	-0.2	-1.2	-2.0
Current grants: official[b]	-8.9	-9.6	-10.1	-12.4	-13.7	-15.0	-17.0	-16.5	-21.8	-14.0	-33.0
Capital transfers[c]	0.2	0.8	1.4	2.1	3.8	6.1	5.9	5.5	4.7	9.2	8.1
Direct investment[d]	-9.7	-10.0	-6.9	-15.9	-15.8	-12.9	-0.8	0.1	-13.5	17.8	-4.0
Portfolio	18.2	23.3	35.9	61.1	65.6	53.6	55.0	150.9	-102.5	52.3	-33.4
Medium and long term loans	2.4	27.7	9.3	24.9	30.3	33.5	26.5	44.8	-10.1	5.4	-2.8
Short term capital[e]	9.6	23.9	34.7	26.4	73.1	-8.0	-31.1	-199.0	116.0	-103.2	35.8
Errors and omissions	-8.7	-0.6	-8.0	-14.0	-20.4	1.4	4.7	-25.4	-6.0	-34.2	13.6
Use of fund credit	-0.0	-0.3	-0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net dividends and interest	-33.2	-36.8	-45.5	-50.5	-68.5	-71.5	-83.6	-69.4	-74.7	-69.7	-71.7
Net transfer of resources (financial basis)	-29.3	19.7	12.3	23.4	54.7	-14.3	-43.4	-108.8	-108.1	-137.5	-89.5
Use of official reserves[f]	-3.8	-38.2	-27.5	-19.2	-53.4	-0.4	35.5	-1.9	-15.5	-16.5	-54.9
Net transfer of resources (expenditure basis)	-33.1	-18.5	-15.2	4.1	1.3	-14.6	-7.9	-110.7	-123.6	-154.0	-144.4

Source: United Nations, based on data of IMF and national sources.

a Preliminary estimate.
b Excluding workers' remittances.
c Including debt forgiveness.
d Net of reinvested earnings.
e Including items unidentified by maturity.
f Additions to reserves are shown as negative numbers.
g Including external transactions of the eastern *Länder* (States) as from July 1990.

Table A.27.

NET TRANSFER OF FINANCIAL RESOURCES OF NET-DEBTOR DEVELOPING COUNTRIES, 1986-1996

Billions of dollars

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996[a]
All countries[b]											
Transfer through direct investment											
Net investment flow	6.3	9.3	15.1	17.7	16.8	23.6	31.2	47.2	62.1	57.9	67.6
Direct investment income: net	-7.4	-8.4	-9.6	-11.1	-12.7	-12.2	-14.1	-15.9	-17.1	-21.7	-27.0
Net transfer	-1.1	0.9	5.5	6.5	4.0	11.4	17.1	31.3	45.0	36.2	40.6
Transfer through medium and long-term foreign private borrowing											
Net credit flow	10.4	5.3	14.6	4.2	12.4	16.4	29.4	40.0	40.5	48.8	84.7
Investment income: net	-32.9	-32.3	-37.5	-31.8	-28.3	-27.4	-28.0	-25.3	-29.6	-38.3	-42.3
Net transfer	-22.5	-27.0	-23.0	-27.6	-16.0	-10.9	1.4	14.8	10.9	10.5	42.5
Transfer through net stock transactions, short-term borrowing and domestic outflows[c]											
Net transfer	-5.3	-11.8	-21.9	-9.0	-9.2	26.9	28.4	35.0	0.8	28.8	14.0
Transfer through private grants: net	4.5	4.8	6.0	7.1	8.4	9.7	11.6	10.4	11.2	7.7	6.7
Transfer through official flows											
Official transfers (grants)	10.8	12.1	13.0	14.0	18.7	18.6	16.6	12.5	9.9	9.7	10.5
Net official credits	19.0	17.1	14.6	21.5	23.1	21.5	17.6	18.7	8.0	28.5	0.2
Investment income: net	-15.2	-15.9	-17.5	-17.8	-20.1	-21.6	-22.1	-23.6	-24.9	-27.6	-27.6
Net transfer	14.6	13.3	10.1	17.7	21.7	18.5	12.1	7.7	-7.0	10.6	-16.8
Total transfer (financial basis)	-9.7	-19.9	-23.3	-5.3	8.9	55.6	70.6	99.2	60.9	93.7	86.9
Use of official reserves[d]	14.6	-6.9	-0.2	-15.2	-34.6	-48.9	-46.0	-51.5	-32.5	-57.7	-52.2
Total transfer (expenditure basis)	4.9	-26.8	-23.5	-20.5	-25.7	6.7	24.6	47.7	28.4	36.0	34.7
Africa											
Grants:											
Private	1.4	1.3	1.3	1.3	1.2	1.5	1.9	1.9	1.8	1.7	1.8
Official	4.8	5.6	6.2	7.4	10.2	10.0	9.3	6.9	5.9	5.2	5.2
Net direct investment	-0.3	-0.6	-0.2	2.4	-0.5	0.4	1.0	0.5	1.3	-1.7	-1.3
Foreign official credit	1.8	2.6	1.2	2.3	1.0	1.3	4.0	0.1	0.2	-2.4	-1.7
Foreign private credit[e]	-0.3	-0.3	0.3	-2.1	-3.9	-5.2	-9.1	-3.1	-2.8	-2.1	-1.8
Short-term borrowing and domestic outflows[c]	-1.3	-6.6	-3.0	-5.1	-5.4	-2.3	0.2	2.9	2.9	1.9	8.7
Total net transfer (financial basis) of which:	6.0	1.9	5.9	6.1	3.0	6.1	7.3	7.3	7.4	0.9	9.1
Net capital flow[f]	14.9	13.2	18.2	19.2	17.0	20.1	18.6	17.9	17.0	10.1	17.9
Use of official reserves[d]	1.7	0.2	1.3	-1.8	-7.8	-6.7	-4.4	-2.5	0.5	7.3	-7.3
Total net transfer (expenditure basis)	7.8	2.1	7.2	4.4	-4.8	-0.7	2.9	4.7	7.9	8.2	1.8

Table A.27 (continued)

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996[a]
Sub-Saharan Africa											
Grants:											
Private	0.7	1.0	1.0	0.9	1.0	1.2	1.6	1.6	1.5	1.3	1.3
Official	3.8	4.6	5.2	6.0	6.6	6.2	6.9	5.0	4.7	4.1	4.2
Net direct investment	-0.5	-0.6	-0.6	-0.6	-1.4	-0.3	-1.1	-1.1	-0.9	-1.1	-0.9
Foreign official credit	1.8	2.8	2.5	2.5	2.9	2.1	2.7	2.4	1.9	-0.5	0.7
Foreign private credit[e]	0.0	-0.3	0.3	0.0	-0.4	-0.4	-0.1	0.2	-0.7	-0.5	-0.8
Short-term borrowing and domestic outflows[c]	-0.2	-1.4	0.0	-2.6	0.3	1.0	1.0	1.1	1.3	1.8	3.6
Total net transfer (financial basis)	5.8	6.1	8.4	6.4	9.0	9.7	11.1	9.2	7.8	5.2	8.1
of which:											
Net capital flow[f]	10.6	11.3	14.5	12.7	15.7	16.0	16.9	14.1	11.8	8.9	11.8
Use of official reserves[d]	0.1	-0.1	-0.8	-0.4	-0.4	-0.5	0.2	0.5	1.5	4.0	-1.8
Total net transfer (expenditure basis)	5.9	6.0	7.6	6.0	8.5	9.2	11.3	9.7	9.3	9.2	6.3
Asia											
Grants:											
Private	1.7	2.0	2.6	3.7	3.6	3.4	5.4	4.6	4.8	0.9	1.7
Official	4.9	4.8	5.0	4.7	5.6	7.0	5.4	4.1	2.4	3.6	3.6
Net direct investment	-0.6	0.4	3.3	4.3	4.3	7.2	11.6	27.9	32.5	22.2	28.2
Foreign official credit	0.9	-0.2	-0.7	2.0	1.6	5.3	3.4	1.6	-5.8	-5.1	-5.8
Foreign private credit[e]	-0.5	-7.7	0.0	-4.0	-1.9	0.9	11.5	9.7	10.4	13.4	50.4
Short-term borrowing and domestic outflows[c]	1.5	-3.7	-9.0	5.3	4.5	19.1	-2.5	7.1	-8.6	7.8	-31.1
Total net transfer (financial basis)	7.9	-4.5	1.2	15.9	17.5	42.8	34.9	55.0	35.7	42.9	46.9
of which:											
Net capital flow[f]	21.8	10.0	16.2	31.0	32.9	60.8	54.5	75.0	56.4	76.2	83.1
Use of official reserves[d]	2.2	-6.6	-10.7	-17.4	-16.2	-28.4	-24.9	-32.2	-41.4	-27.6	-14.5
Total net transfer (expenditure basis)	10.1	-11.1	-9.5	-1.5	1.3	14.4	9.9	22.8	-5.8	15.3	32.4

Table A.27 (continued)

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996[a]
Latin America											
Grants:											
Private	1.1	1.2	1.7	1.6	2.9	3.8	3.8	3.1	3.1	3.2	3.2
Official	1.5	2.0	2.1	2.2	3.4	2.2	2.4	2.0	1.9	1.8	1.7
Net direct investment	-0.9	0.5	2.2	-0.4	-0.2	4.0	4.5	3.1	10.7	9.4	10.3
Foreign official credit	0.8	-1.3	-1.7	-0.7	0.3	-6.9	-9.1	-6.8	-11.3	11.9	-22.2
Foreign private credit[e]	-21.7	-18.9	-23.4	-21.6	-9.9	-6.6	-4.0	8.2	3.3	4.1	12.7
Short-term borrowing and domestic outflows[c]	-0.6	-0.3	-10.6	-7.4	-8.4	10.6	31.6	27.0	3.5	3.8	22.6
Total net transfer (financial basis) of which:	-19.8	-16.7	-29.8	-26.3	-11.9	7.2	29.3	36.7	11.2	34.2	28.2
Net capital flow[f]	12.5	14.6	4.3	11.4	22.3	37.7	59.5	69.7	44.3	70.1	66.2
Use of official reserves[d]	7.6	-1.7	7.9	-1.3	-15.5	-16.2	-20.7	-21.7	5.3	-24.8	-30.4
Total net transfer (expenditure basis)	-12.2	-18.4	-21.9	-27.6	-27.4	-9.0	8.6	15.0	17.9	-0.5	-2.2

Source: United Nations, based on data of IMF, OECD and World Bank and United Nations Secretariat estimates.

Note: Direct investment is net of reinvested earnings (cash flow approach); official credits include use of IMF credit; interest includes IMF charges; private grants include net flow of gifts from overseas residents (excluding workers' remittances) and grants by non-governmental organizations.

a Preliminary estimate.
b Sample of 105 countries (principal difference from data in table III.1 is omission of certain countries, mainly from Asia, for which full financial data were not available.
c Calculated as a residual (including short-term trade financing, normal outflows and "capital flight", arrears of interest due, stock transactions and other flows captured in balance-of-payments data as errors and omissions and presumed to be financial flows).
d Additions to reserves are shown as negative numbers.
e Medium- and long-term foreign borrowing.
f Total net capital flow before the payment of direct investment income.

Table A.28.
OFFICIAL RESERVES AND COVERAGE OF CURRENT EXPENDITURES OF NET-DEBTOR DEVELOPING COUNTRIES, 1986-1996

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996[a]
Level of reserves[b] ***(billions of dollars)***											
All countries[c]	80.0	88.2	88.6	104.9	133.1	163.4	213.5	266.1	331.9	384.6	464.8
Africa	15.6	17.3	15.4	17.4	24.7	30.9	33.4	30.3	35.2	38.5	45.8
of which:											
Sub-Saharan Africa	5.0	5.8	6.3	6.9	8.1	9.4	9.0	9.6	11.3	13.2	14.6
Asia	31.4	33.1	41.9	54.6	60.3	75.6	103.0	137.4	190.2	229.2	276.7
Latin America	33.0	37.9	31.3	33.0	48.1	56.9	77.0	98.5	106.6	116.9	142.2
Coverage of current expenditures[d] ***(months of import coverage)***											
All countries[c]	2.0	2.0	1.7	1.9	2.1	2.3	2.7	3.0	3.4	3.4	3.8
Africa	2.2	2.3	1.9	2.0	2.5	3.1	3.3	3.1	3.5	3.8	4.4
of which:											
Sub-Saharan Africa	1.5	1.6	1.6	1.7	1.7	2.1	1.9	2.2	2.7	3.0	3.0
Asia	1.5	1.4	1.5	1.7	1.6	1.7	2.1	2.5	3.1	3.1	3.4
Latin America	2.8	3.1	2.3	2.2	2.9	3.1	3.8	4.3	4.1	4.2	4.5

Source: United Nations, based on IMF and national estimates.

a Partly estimated.
b Total reserves, end of period (with gold valued at SDR 35 per ounce).
c Sample of 105 countries.
d Expenditures on goods and services (including interest payments) for given year relative to total reserves at end of year.

Table A.29.
NET IMF LENDING TO DEVELOPING COUNTRIES, BY FACILITY, 1986-1996

Billions of dollars

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Regular facilities	0.3	-3.4	-12.1	2.9	1.6	-1.1	0.0	-0.2	-0.8	12.5	-2.6
Repayment terms:											
3-5 years (Credit tranche)	1.3	-0.6	-0.2	-0.2	-1.6	0.3	1.5	-0.2	0.1	12.4	-1.4
3.5-7 years (SFF/EAP)[a]	-0.8	-2.2	-11.0	3.1	2.5	-0.7	-1.5	-1.5	-1.4	-1.6	-1.3
4-10 years (Extended Fund Facility)	-0.2	-0.5	-0.9	0.1	0.7	-0.7	-0.0	1.5	0.5	1.8	0.1
Concessional facilities	-0.5	-0.2	-0.3	0.9	0.2	1.1	0.8	0.2	0.9	1.5	0.2
In order created:											
Trust Fund[b]	-0.6	-0.7	-0.7	-0.5	-0.4	-0.1	0.0	-0.1	-0.0	-0.0	0.0
SAF[c]	0.1	0.5	0.3	0.7	0.1	0.2	0.0	-0.1	-0.2	-0.1	-0.4
ESAF[c]	-	-	-	0.8	0.5	0.9	0.7	0.4	1.1	1.6	0.5
Additional facilities[d]	-1.9	-1.1	-0.4	0.2	-0.8	1.2	-0.9	-0.2	-0.9	-1.6	-0.7
In order Created:											
Compensatory financing[e]	-1.8	-1.1	-0.4	0.2	-0.8	1.2	-0.9	-0.2	-0.9	-1.6	-0.7
Buffer stock[f]	-0.2	-0.1	-0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
STF[g]								0.0	0.0	0.0	0.0
Total	-2.1	-4.7	-12.9	4.0	1.0	1.2	-0.1	-0.2	-0.7	12.5	-3.1
Memo items:											
Selected characteristics of higher conditionality lending agreements											
Number initiated during year	31	25	27	23	12	24	17	13	26	18	20
Average length (months)	22	26	25	25	19	22	26	24	25	23	29
Total amount committed (billions of dollars)	4.0	4.4	5.0	13.8	1.3	6.4	7.1	3.0	6.6	23.2	5.2

Source: Data of IMF, *International Financial Statistics* and IMF *Survey*.

a The Supplementary Financing Facility (SFF) (1979-1981) and the Enhanced Access Policy (EAP) (1981-present) have provided resources from funds borrowed by IMF from Member States, on which the Fund pays a higher interest rate than the remuneration paid to countries that have a net creditor position with the Fund. Thus, users of SFF and EAP resources have paid a higher interest rate than that on drawings from ordinary resources, which are partly subsidized (for example, in fiscal 1981/82: 6.3 per cent versus 14.8 per cent for SFF and 13.2 per cent for EAP; by 1985/86, the spread was much reduced: 7 per cent versus 9.4 per cent and 9.2 per cent). However, up to a 3 percentage point subsidy was made available for IDA-eligible countries and up to half that for countries with GDP per capita above International Development Association (IDA) limits but under the maximum for Trust Fund eligibility, in order to reduce interest on SFF drawings towards the rate on ordinary drawings. There has been no subsidy on EAP drawings.

b Mainly using resources from IMF gold sales, the Trust Fund lent during 1977-1981 under one-year adjustment programmes. Eligibility was based on maximum per capita income criteria and loans had 10 year maturities, with repayments beginning in the sixth year. The interest rate was 0.5 per cent per year.

c The Structural Adjustment Facility (SAF) and the Enhanced Structural Adjustment Facility (ESAF) (the first financed mainly from Trust Fund reflows and the second from loans and grants) have made loans to IDA-eligible countries with protracted balance-of-payments problems; funds are disbursed over 3 years (under Policy Framework Paper arrangements), with repayments beginning in 5.5 years and ending in 10 years; the interest rate is 0.5 per cent.

d All having final maturity of 7 years and repayments beginning in 3.5 years.

e Compensatory Financing Facility from 1963 to 1988; Compensatory and Contingency Financing Facility from August 1988.

f Helps to finance buffer stock purchases under approved international buffer stock arrangements; established June 1969.

g See description in the note to table A.30 below.

Table A.30.
NET IMF LENDING TO ECONOMIES IN TRANSITION: BY FACILITY, 1986-1996

Billions of dollars

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Regular facilities	-0.5	-1.1	-0.9	-0.9	0.1	2.0	1.8	0.1	0.2	4.4	3.7
Repayment terms:											
3-5 years (Credit tranche)	-0.2	-0.4	-0.0	-0.2	0.4	1.0	1.8	0.1	0.5	4.9	1.2
3.5-7 years (SFF/EAP)	-0.3	-0.7	-0.9	-0.7	-0.3	0.2	-0.0	0.0	-0.3	-0.0	-0.0
4-10 years (Extended Fund Facility)	..	..	..	..	..	0.8	0.1	0.0	0.0	-0.5	2.6
Concessional facilities (ESAF)	..	..	..	..	..	..	..	0.0	0.0	0.1	0.2
Additional facilities											
Compensatory financing	-0.1	-0.0	0.0	0.0	0.0	1.5	-0.1	0.0	-0.7	-0.6	-0.2
STF	..	..	..	..	..	..	..	2.0	2.8	0.9	0.0
Total	-0.5	-1.1	-0.9	-0.9	0.1	3.5	1.7	2.1	2.3	4.8	3.7
Memo items:											
Selected characteristics of lending agreements											
Number initiated during year	0	0	2	0	3	5	6	9	8	12	12
Average length (months)	0	0	12	0	12	12	12	18	18	13	28
Total amount committed (billions of dollars)	0.0	0.0	0.8	0.0	1.6	4.9	1.5	1.6	2.1	9.2	13.2

Source: Data of IMF, *International Financial Statistics.*

Note: The Systemic Transformation Facility (STF), created in 1993 on a temporary basis, assists economies in transition with severe balance-of-payments problems arising from dis continuance of trade arrangements under planning. For members that have not yet had a standby arrangement, drawings can be made be in two tranches in support of a written statement of policy reform intentions, the second 6-18 months after the first, assuming satisfactory progress towards an upper credit tranche arrangement (repayment terms are the same as for the Extended Facility). See table A.29 above for description of other facilities.

Table A.31.
FUNDS RAISED ON INTERNATIONAL CREDIT MARKETS, 1986-1996

Billions of dollars

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
World total	321.4	303.7	371.9	385.3	361.4	432.5	458.3	625.8	669.7	841.3	1058.6
grouped by borrower:											
Developed economies	283.5	260.0	329.2	344.5	311.8	371.8	396.5	524.5	578.1	747.0	907.5
Transition economies	3.9	3.7	4.3	4.7	4.7	1.7	1.5	6.3	3.7	2.0	6.8
Developing countries	23.9	28.1	27.9	23.1	29.5	44.4	39.4	74.2	75.6	74.6	119.4
Multilateral institutions	10.1	11.9	10.5	12.9	15.4	14.7	20.9	20.7	12.4	17.7	24.9
grouped by instrument:											
Bonds	228.1	180.8	229.7	255.8	229.9	308.7	333.7	481.0	428.6	467.3	710.6
International bonds	187.7	140.5	178.9	212.9	180.1	258.2	276.1	394.6	368.4	371.3	591.6
Foreign and special placements	40.4	40.3	50.8	42.9	49.8	50.6	57.6	86.4	60.2	96.0	119.0
Loans	93.3	122.9	142.2	129.5	131.5	123.8	124.6	144.8	241.1	374.0	347.9
Bank loans	63.2	91.7	125.6	121.2	124.5	116.0	117.9	136.7	236.2	370.2	343.4
Other facilities	30.0	31.2	16.6	8.4	7.0	7.7	6.7	8.2	4.9	3.8	4.5

Source: Data of OECD, *Financial Statistics Monthly.*

Table A.32.
NET ODA FROM MAJOR SOURCES, BY TYPE, 1976-1995

Donor group or country	Growth rate of ODA[a] (1994 prices and exchange rates)		ODA as percentage of GNP	Total ODA (millions of dollars)	Percentage distribution of ODA by type, 1995					
					Bilateral			Multilateral		
	1976-1985	1986-1995	1995	1995	Grants[b]	Technical cooperation	Loans	United Nations	IDA	Other
Total DAC countries	4.2	0.6	0.27	58 894	61.4	24.3	7.5	7.2	9.2	14.7
Total EU	4.7	1.3	0.38	31 478	61.7	25.4	3.6	6.0	7.8	21.1
Austria	7.8	2.4	0.33	767	49.2	21.1	23.9	4.6	7.6	14.9
Belgium	1.9	-2.6	0.38	1 034	51.5	28.4	-1.8	4.5	20.1	25.6
Denmark	6.3	3.9	0.96	1 623	66.3	6.2	-11.2	20.2	5.8	18.9
Finland	11.4	-0.8	0.32	388	62.6	13.1	-5.7	17.8	8.8	16.8
France[c]	5.6	1.8	0.55	8 443	69.8	29.9	6.4	1.3	5.7	16.8
Germany	3.8	0.0	0.31	7.524	58.4	32.9	5.6	4.1	9.8	22.1
Ireland	12.3	6.4	0.29	153	57.5	34.0	0.0	9.8	4.6	28.1
Italy	13.3	-0.5	0.15	1 623	37.5	5.0	12.2	9.1	0.6	40.6
Luxembourg	..	10.7	0.36	65	66.2	3.1	0.0	7.7	7.7	18.5
Netherlands	5.9	0.7	0.81	3 226	78.9	29.4	-9.3	9.5	7.5	13.5
Portugal	..	..	0.27	271	41.0	27.3	24.7	7.0	2.6	24.4
Spain	..	13.8	0.24	1 348	39.5	12.5	21.0	3.4	9.1	27.0
Sweden	2.5	1.5	0.77	1 704	69.8	13.9	0.0	15.2	6.8	8.2
United Kingdom	-0.1	1.3	0.28	3 157	53.9	24.8	-1.0	6.1	10.3	30.7
Australia	1.1	0.5	0.36	1 194	77.6	30.7	0.0	8.1	7.2	7.9
Canada	2.8	0.4	0.38	2 067	69.0	19.2	-2.0	9.2	9.7	14.1
Japan	6.9	2.3	0.28	14 489	43.5	16.6	28.4	5.1	13.1	9.9
New Zealand	-3.3	0.6	0.23	123	78.9	34.1	0.0	6.5	7.3	7.3
Norway	9.2	2.5	0.87	1 244	72.4	14.1	0.5	18.5	6.9	1.7
Switzerland	7.8	3.1	0.34	1 084	72.3	33.5	-0.5	12.5	12.3	3.3
United States	1.7	-3.4	0.10	7 367	86.7	35.5	-10.5	13.2	7.4	3.1
Arab countries[d] of which:										
Saudi Arabia	..	..	..	192	—	69.8	—	—	30.2	—
Kuwait	..	..	..	371	—	92.7	—	—	7.3	—
United Arab Emirates	..	..	..	65	—	84.6	—	—	15.4	—
Other developing countries[d]:										
Republic of Korea	..	..	..	116	—	61.2	—	—	57.1	—
Taiwan Province of China	..	..	..	92	—	84.8	—	—	10.1	—
Turkey	..	..	..	96	—	76.0	—	—	24.0	—

Source: United Nations, based on OECD, *Development Co-operation*, 1996 Report.

a Average annual rates of growth, calculated from average levels in 1974-1975, 1984-1985 and 1994-1995.
b Including technical cooperation.
c Excluding flows from France to the Overseas Departments, namely Guadeloupe, French Guiana, Martinique and Réunion.
d Bilateral ODA includes all grants and loans; multilateral ODA includes United Nations, IDA and "other", including technical cooperation.

Table A.33.
REGIONAL DISTRIBUTION OF ODA FROM MAJOR SOURCES, 1984-1995

Donor group or country	All developing countries		Latin America		Africa		West Asia		Southern and Eastern Asia	
	1984-1985	1994-1995	1984-1985	1994-1995	1984-1985	1994-1995	1984-1985	1994-1995	1984-1985	1994-1995
Millions of Dollars, two-year average										
Total ODA[a] (net)	27258.8	46156.7	3222.5	6018.4	11640.5	20918.2	3964.2	3270.2	8431.7	15949.8
DAC countries, bilateral	17 431.1	31 033.3	2 400.0	4 244.6	7 595.5	13 152.6	2 095.7	2 347.7	5 339.8	11 288.4
Australia	541.2	785.6	1.6	0.7	46.1	59.8	1.8	2.6	491.7	722.6
Austria	144.1	359.3	6.5	31.5	114.0	137.3	9.4	26.5	14.3	164.1
Belgium	237.4	344.8	16.0	76.7	186.9	214.2	4.7	5.9	30.0	48.0
Canada	815.9	726.5	40.4	131.1	375.9	344.2	2.9	18.2	296.8	232.9
Denmark	207.7	568.5	4.2	48.6	125.5	368.1	1.6	1.3	76.5	150.6
Finland	104.2	161.6	7.3	15.4	73.6	87.8	0.4	4.6	23.0	53.9
France[b]	2 012.0	5 652.2	125.4	293.2	1 336.9	3 796.5	62.3	157.6	487.4	1 405.0
Germany	1 625.6	3 370.4	202.3	524.4	770.3	1 466.9	106.9	158.4	546.1	1 220.9
Ireland	10.4	56.4	0.1	1.7	10.1	49.6	..	0.5	0.3	4.6
Italy	638.6	1 101.5	67.1	189.7	495.7	762.8	43.3	20.8	32.6	128.4
Japan	2 366.7	8 543.2	227.0	986.9	381.5	1 507.1	76.3	4 66.2	1 681.9	5 583.1
Luxembourg	..	16.0	..	4.2	..	10.2	..	0.1	..	1.6
Netherland	712.7	1 342.9	165.6	392.9	298.4	655.4	15.1	72.3	233.6	222.4
New Zealand	40.6	81.1	0.2	1.1	0.4	3.5	0.1	0.1	40.0	76.5
Portugal	..	191.8	..	0.7	..	190.7	..	0.2	..	0.3
Norway	276.2	575.9	13.9	60.3	177.0	363.2	1.2	11.1	84.1	141.4
Spain	..	730.9	..	399.5	..	156.5	..	2.9	..	172.1
Sweden	449.6	809.8	34.8	134.9	254.1	415.1	1.8	35.0	158.9	224.9
Switzerland	187.4	484.7	31.3	98.2	105.9	231.8	2.8	11.8	47.4	143.0
United Kingdom	634.6	1 188.0	53.1	116.2	297.1	602.8	12.6	36.7	271.9	432.4
United States	6 426.5	4 881.0	1 303.5	1 141.5	2 546.5	2 087.0	1 753.0	1 318.5	823.5	334.0
DAC countries, multilateral	6 922.3	14 484.4	816.4	1 776.1	2 962.5	7 583.2	241.2	394.5	2 902.2	4 730.7
TOTAL DAC	24 353.3	45 517.6	3 216.4	6 020.7	10 558.0	20 735.8	2 336.9	2 742.1	8 242.0	16 019.0
Arab countries, bilateral[c]	2 772.9	516.1	0.4	0.0	1014.9	109.6	1 593.1	470.7	164.5	-64.2
Arab countries, multilateral	132.6	123.0	5.7	-2.3	67.6	72.9	34.2	57.4	25.2	-5.1

Source: United Nations calculations based on OECD, Geographical Distribution of Financial Flows to Aid Recipients.

a Excluding assistance provided by centrally planned and transition economies, owing to measurement difficulties. Donor total includes unallocated amounts and hence is larger than the sum of the amounts per region.
b Excluding flows from France to the Overseas Departments, namely Guadeloupe, French Guiana, Martinique and Réunion.
c Approximately 35-40 per cent of Arab bilateral aid is geographically unallocated, depending on the year.

Table A.34.
RESOURCE COMMITMENTS OF MULTILATERAL DEVELOPMENT INSTITUTIONS, 1986-1996[a]

Millions of dollars

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Financial institutions	24 960	26 640	27 636	32 410	34 766	39 859	39 771	39 530	40 639	44 050	44 705
African Development Bank	1 640	2 140	2 194	2 841	3 191	3 445	2 982	2 518	1 434	669	803
Asian Development Bank	2 044	2 508	3 220	3 760	4 095	4 914	5 226	5 426	3 864	5 759	5 827
Caribbean Development Bank	67	41	58	73	109	111	71	71	56	110	105
European Bank for Reconstruction and Development	..	..	..	..	..	66	1 071	1 925	2 436	3 283	2 843
Inter-American Development Bank	3 057	2 408	1 738	2 694	4 005	5 661	6 246	6 191	5 298	7 454	6 951
of which:											
Inter-American Investment Corporation	..	..	..	15	67	102	158	124	43	36	72
International Fund for Agricultural Development	147	233	244	277	323	281	331	383	364	414	447
World Bank Group	18 005	19 310	20 182	22 765	23 043	25 381	23 844	23 016	27 187	26 361	27 729
International Bank for Reconstruction and Development	13 593	14 066	14 411	16 251	15 176	17 021	15 551	15 098	16 427	15 950	15 325
International Development Association	3 373	3 841	4 350	4 924	6 300	7 160	6 310	5 345	7 282	5 973	6 490
International Finance Corporation	1 039	1 403	1 421	1 590	1 567	1 200	1 983	2 573	3 478	4 438	5 914
Operational agencies of the United Nations system	1 966	1 957	2 493	2 542	2 754	3 628	3 683	3 342	3 476	3 567	3 706
United Nations Development Programme[b]	689	702	833	897	1 042	1134	1 027	1 031	1 036	1 014	1 231
United Nations Population Fund	116	134	169	194	211	212	164	206	278	340	285
United Nations Children's Fund	248	330	454	498	545	947	917	623	769	1 117	1 123
World Food Programme	913	791	1 037	953	956	1 335	1 575	1 482	1 393	1 096	1 067
Total commitments	26 926	28 597	30 129	34 952	37 520	43 487	43 454	42 872	44 115	47 617	48 411
Memo item:											
Commitments in units of 1990 purchasing power[c]	35 429	33 644	32 749	38 409	37 520	42 188	43 135	44 198	44 561	44 090	45 671

Source: Annual reports and information supplied by individual institutions.

a Loans, grants, technical assistance and equity participation, as appropriate; all data are on a calendar-year basis.
b Including United Nations Development Programme (UNDP)-administered funds.
c Total commitments deflated by the United Nations index of manufactured export prices in dollars of developed economies: 1990 =100.

Table A.35.
EXTERNAL DEBT AND DEBT INDICATORS FOR ECONOMIES IN TRANSITION, 1986-1996

External debt (billions of dollars)	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996[a]
Russian Federation/ former Soviet Union[b]											
Total external debt	30.7	38.3	42.2	53.9	59.8	67.6	79.0	112.9	121.9	120.5	..
Long-term debt	23.3	29.7	31.0	35.7	48.0	55.0	65.9	104.6	111.9	109.9	..
Concessional	0.0	0.0	0.0	0.0	0.0	0.7	1.5	34.2	33.1	22.1	..
Bilateral	0.0	0.0	0.0	0.0	0.0	0.7	1.3	34.0	32.9	22.0	..
Multilateral	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.2	..
Official Non-concessional	0.6	1.7	2.1	2.4	6.3	9.3	11.0	23.4	33.9	44.3	..
Bilateral	0.6	1.5	1.9	2.2	5.9	8.9	9.7	19.8	28.3	32.7	..
Multilateral	0.0	0.1	0.2	0.2	0.4	0.4	0.4	1.2	1.4	1.9	..
IMF credit	0.0	0.0	0.0	0.0	0.0	0.0	1.0	2.5	4.2	9.6	..
Private creditors	22.7	28.1	28.9	33.3	41.7	45.0	53.3	47.0	45.0	43.5	..
of which:											
Bonds	0.0	0.0	0.3	1.4	1.9	1.9	1.7	1.6	1.8	1.1	..
Commercial Banks[c]	13.0	14.5	15.3	17.9	18.6	17.0	17.8	15.1	15.4	15.9	..
Short term debt	7.4	8.6	11.2	18.2	11.8	12.6	13.1	8.3	10.0	10.6	..
Central and Eastern Europe											
Total external debt	93.5	106.2	102.2	101.9	109.2	117.9	113.6	118.5	123.8	136.9	138.8
Long-term debt	80.5	91.1	84.5	83.8	91.0	102.2	100.5	105.7	111.8	121.4	121.9
Concessional	5.7	6.1	5.8	4.8	5.2	4.9	14.4	13.7	12.7	15.1	15.3
Bilateral	5.5	5.9	5.6	4.6	5.0	4.7	14.1	13.3	12.1	13.9	14.0
Multilateral	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.6	1.2	1.3
Official, Non-concessional	29.9	33.4	30.0	31.3	36.5	47.8	39.0	41.2	43.9	41.8	40.9
Bilateral	19.5	22.0	21.1	24.2	28.3	34.4	24.0	25.1	25.8	25.9	25.1
Multilateral	6.6	8.2	6.8	6.0	6.9	8.4	9.7	10.7	12.4	12.9	13.4
IMF credit	3.8	3.2	2.1	1.1	1.3	5.0	5.4	5.4	5.7	3.1	2.5
Private creditors	44.9	51.6	48.7	47.7	49.3	49.5	47.0	50.8	55.2	64.4	65.7
of which:											
Bonds	1.0	1.8	2.5	3.7	5.0	6.7	7.4	11.7	28.1	30.9	30.2
Commercial Banks[c]	30.2	34.7	33.8	34.3	34.6	33.6	30.8	28.9	14.3	16.7	17.2
Short term debt	13.0	15.1	17.7	18.1	18.2	15.7	13.1	12.7	12.0	15.6	17.0
Hungary											
Total external debt	16.9	19.6	19.6	20.4	21.3	22.6	22.0	24.3	28.1	31.2	..
Long-term debt	13.4	16.5	16.2	17.1	18.3	20.4	19.7	22.2	25.7	28.0	..
Concessional	0.7	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.5	..
Bilateral	0.6	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.4	..
Multilateral	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	..
Official, Non-concessional	2.0	2.1	2.3	2.4	3.0	5.0	4.9	4.9	5.1	4.0	..
Bilateral	0.1	0.1	0.1	0.1	0.1	0.5	0.6	0.6	0.6	0.5	..
Multilateral	0.8	1.2	1.6	1.8	2.5	3.3	3.2	3.1	3.3	3.1	..
IMF credit	1.0	0.8	0.6	0.5	0.3	1.3	1.2	1.2	1.1	0.4	..
Private creditors	10.8	14.2	13.9	14.6	15.3	15.3	14.7	17.1	20.3	23.5	
of which											
Bonds:	1.0	1.8	2.5	3.4	4.7	6.0	6.8	10.1	13.5	15.8	..
Commerical Banks[c]	8.2	10.7	9.9	10.2	9.6	8.1	6.4	5.1	3.9	3.3	..
Short term debt	3.5	3.1	3.4	3.3	2.9	2.2	2.3	2.0	2.4	3.2	..

EXTERNAL DEBT AND DEBT INDICATORS FOR ECONOMIES IN TRANSITION, 1986-1996

Table A.35 (continued)

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996[a]
Poland											
Total external debt	36.6	42.6	42.1	43.1	49.4	53.4	48.5	45.2	42.6	42.3	..
Long-term debt	31.9	36.0	33.6	34.5	39.8	45.9	44.0	42.5	41.7	42.1	..
Concessional:	3.7	4.5	4.4	3.5	3.8	3.7	13.0	12.6	10.8	11.1	..
Bilateral	3.7	4.5	4.4	3.5	3.8	3.7	13.0	12.6	10.8	11.1	..
Multilateral	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	..
Non-concessional	17.0	18.9	17.4	20.1	24.6	31.0	20.7	20.6	21.6	21.1	..
Bilateral	16.1	18.0	16.7	19.6	23.6	29.3	18.7	18.4	18.3	19.1	..
Multilateral	0.9	0.9	0.7	0.5	0.5	0.9	1.2	1.5	2.0	2.1	..
IMF credit	0.0	0.0	0.0	0.0	0.5	0.9	0.8	0.7	1.3	0.0	..
Private creditors of which:	11.1	12.6	11.7	10.9	11.3	11.1	10.3	9.4	9.3	9.9	..
Bonds	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.9	8.1	..
Commercial Banks	8.8	9.9	9.2	9.0	9.8	9.7	9.1	8.6	0.4	0.6	..
Short term debt	4.7	6.6	8.5	8.6	9.6	7.6	4.5	2.7	0.8	0.2	..
Debt indicators (Percentage)											
Ratio of external debt to GNP											
Russian Federation/former Soviet Union[d]	7.5	8.2	7.6	9.0	10.4	12.5	18.6	29.5	37.7	37.6	..
Central and Eastern Europe of which:	33.5	39.0	37.9	34.1	38.8	65.4	58.6	51.7	48.5	44.0	40.1
Bulgaria	29.1	29.4	39.6	48.0	57.1	125.1	120.4	121.3	111.0	92.3	..
Former Czechoslovakia	11.6	12.2	13.7	15.3	17.8	30.4	26.2				
Czech Republic								29.5	29.7	37.0	..
Slovakia								28.0	35.0	33.5	..
Hungary	74.3	78.1	71.4	73.4	67.2	70.7	61.7	65.0	70.2	72.8	..
Poland	51.4	69.8	64.0	54.5	88.8	72.6	58.7	53.4	46.6	36.1	..
Romania	13.5	17.4	7.3	2.6	3.0	7.4	13.0	16.2	18.5	19.5	..
Ratio of external debt to exports											
Russian Federation/former Soviet Union[d]	45.9	52.3	57.8	72.7	73.8	124.5	144.2	171.7	156.7	126.7	..
Central and Eastern Europe of which:	151.7	157.7	146.9	150.7	179.4	215.4	166.7	147.4	133.8	111.1	99.8
Bulgaria	58.9	71.4	84.8	105.4	154.0	287.5	240.5	258.2	210.1	163.0	..
Former Czechoslovakia	34.0	36.5	40.1	45.7	56.1	75.2	42.8				
Czech Republic								50.2	54.2	67.4	..
Slovakia								48.4	53.6	62.6	..
Hungary	166.0	175.0	173.9	169.8	172.8	180.5	157.8	212.4	245.5	174.2	..
Poland	259.3	294.6	253.8	261.5	251.4	286.4	249.6	246.0	191.3	127.3	..
Romania	66.1	57.7	23.8	9.4	17.4	42.2	63.8	73.7	75.6	73.1	..
Ratio of debt service to exports											
Russian Federation/former Soviet Union[d]	11.8	11.9	11.3	12.3	14.6	24.9	2.4	3.5	4.7	6.6	..
Central and Eastern Europe of which:	24.2	23.0	24.7	22.4	20.9	19.5	16.8	12.0	15.4	14.8	11.3
Bulgaria	15.6	17.2	22.2	26.8	19.4	6.4	8.1	5.9	13.4	18.8	..
Former Czechoslovakia	8.2	7.9	9.0	9.8	9.0	10.4	9.2				
Czech Republic								7.6	12.7	10.5	..
Slovakia								8.5	8.6	9.7	..
Hungary	41.1	33.5	31.2	29.7	34.3	31.9	35.6	38.7	49.3	39.1	..
Poland	12.8	14.2	10.6	9.4	4.9	5.2	7.6	9.2	14.0	12.2	
Romania	18.7	21.9	33.3	16.9	0.3	2.4	9.1	6.1	8.5	10.6	..

Source: United Nations, based on IMF and World Bank.

a Estimate.
b In 1992, the Russian Federation assumed the debt of the former Soviet Union.
c Government or government-guaranteed debt only.
d Merchandise exports only.

Table A.36.
EXTERNAL DEBT OF NET DEBTOR DEVELOPING COUNTRIES, 1986-1996

Billions of dollars

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996[a]
All countries[b]											
Total external debt	980.2	1106.2	1110.6	1165.7	1257.4	1320.6	1381.5	1472.3	1584.7	1715.6	1825.7
Long-term debt	849.1	969.3	967.5	1003.9	1056.0	1096.7	1126.9	1195.4	1307.1	1379.6	1448.0
Concessional	188.1	225.7	236.3	275.1	303.9	323.8	335.1	354.8	388.2	395.6	393.3
Bilateral	138.9	167.8	175.2	208.1	227.7	239.2	245.0	257.5	277.3	275.5	266.2
Multilateral[c]	49.2	57.8	61.1	67.0	76.2	84.6	90.1	97.3	110.9	120.1	127.1
Non-Concessional	197.3	242.2	241.0	247.5	271.9	288.3	295.9	307.8	337.4	353.3	343.5
Bilateral	80.0	99.6	105.7	111.1	116.0	125.4	134.6	138.4	157.5	160.8	151.1
Multilateral	81.7	106.0	104.4	108.6	126.1	134.5	134.8	143.4	154.0	155.9	159.9
IMF credit	35.7	36.6	30.9	27.9	29.8	28.5	26.5	26.0	26.0	36.6	32.5
Private creditors	463.7	501.5	490.1	481.2	480.2	484.5	495.9	532.8	581.5	597.5	667.5
of which:											
Bonds	32.5	34.5	38.2	40.7	98.0	104.5	116.0	149.7	206.1	213.1	239.7
Commerical Banks[d]	262.0	288.9	286.8	278.9	203.8	196.6	185.3	165.8	129.1	124.5	127.4
Short-term debt	131.1	136.8	143.1	161.8	201.4	223.9	254.6	276.9	277.6	336.0	377.7
Memo items:											
Principal arrears on long-term debt	24.7	28.8	38.0	42.5	52.5	55.2	60.6	63.5	71.4	76.0	75.3
Interest arrears on long-term debt	8.8	15.2	18.0	28.8	39.2	41.3	37.4	38.5	35.5	34.9	29.6
Latin America											
Total external debt	428.5	469.0	456.1	452.8	474.9	491.7	508.8	550.8	585.7	636.6	656.5
Long-term debt	392.0	424.1	406.9	393.2	397.5	404.8	413.8	440.7	467.9	517.1	534.5
Concessional	36.3	42.3	44.9	46.4	49.1	51.5	53.4	55.1	57.7	59.8	59.9
Bilateral	30.8	36.5	39.0	40.1	42.4	44.5	46.1	47.5	49.5	51.0	50.6
Multilateral	5.4	5.8	5.9	6.2	6.7	7.0	7.3	7.6	8.1	8.8	9.3
Non-concessional	74.6	94.1	97.2	99.8	115.7	123.4	126.3	128.0	132.0	156.0	141.3
Bilateral	22.8	30.0	36.0	38.1	44.0	50.7	56.6	56.1	57.6	65.5	51.6
Multilateral	35.5	46.0	44.9	46.0	53.6	55.7	54.9	58.0	61.1	64.4	66.4
IMF credit	16.3	18.1	16.3	15.6	18.1	17.1	14.8	13.9	13.4	26.2	23.3
Private creditors	281.1	287.7	264.8	247.1	232.7	229.8	234.1	257.7	278.2	301.2	333.3
of which:											
Bonds[d]	17.6	16.8	18.1	19.1	76.0	79.1	81.8	108.9	157.0	171.7	197.2
Commercial banks[d]	188.9	200.7	190.2	178.5	102.4	97.2	94.5	75.1	38.0	34.0	37.1
Short-term debt	36.5	45.0	49.1	59.6	77.4	86.9	95.1	110.1	117.8	119.5	122.0
Memo items:											
Principal arrears on long-term debt	9.4	12.3	15.0	18.2	24.6	24.1	23.9	20.2	20.1	16.2	9.4
Interest arrears on long-term debt	3.5	8.3	8.6	16.5	25.6	26.9	20.9	17.8	12.4	9.1	2.5

Table A.36 (continued)

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996[a]
Africa											
Total external debt	229.2	266.4	271.4	279.6	288.8	290.8	286.7	288.8	308.7	328.9	340.5
Long-term debt	188.9	232.5	237.2	242.8	252.5	255.6	249.3	248.4	267.3	282.1	290.5
Concessional	55.6	66.5	69.5	73.3	80.6	87.8	91.3	96.2	106.7	116.3	119.5
Bilateral	38.2	44.7	46.2	47.1	51.1	54.7	56.3	58.3	63.1	66.9	66.6
Multilateral[c]	17.4	21.8	23.3	26.2	29.5	33.0	35.0	38.0	43.6	49.5	52.9
Non-Concessional	62.4	79.0	78.5	82.6	83.8	86.6	85.3	84.5	93.7	98.3	98.7
Bilateral	39.8	50.9	51.7	55.4	54.1	55.3	54.4	52.3	58.9	63.5	63.6
Multilateral	15.1	20.0	19.4	20.5	23.6	25.6	25.9	27.2	29.0	29.6	29.6
IMF credit	7.6	8.1	7.4	6.6	6.1	5.7	5.0	5.0	5.8	5.2	5.5
Private creditors	70.9	86.9	89.2	86.9	88.1	81.3	72.6	67.7	66.9	67.4	72.3
of which:											
Bonds[d]	5.0	5.2	4.7	4.5	3.6	3.1	5.1	2.9	3.8	4.6	5.2
Commercial Banks[d]	22.4	31.2	33.0	31.9	31.1	29.3	22.7	21.1	21.7	23.4	23.6
Short-term debt	40.4	34.0	34.3	36.7	36.3	35.2	37.4	40.3	41.4	46.8	50.1
Memo items:											
Principal arrears on long-term debt	13.0	13.0	19.6	19.7	21.7	21.5	24.9	30.6	34.2	40.1	43.2
Interest arrears on long-term debt	4.8	6.3	8.5	10.6	10.9	10.9	13.0	16.8	18.6	20.8	21.7
Sub-Saharan Africa											
Total external debt	92.0	111.5	113.2	119.5	135.4	141.3	144.2	148.6	155.4	165.2	167.0
Long-term debt	82.7	100.0	100.5	104.1	116.7	121.1	121.9	124.2	132.9	140.5	141.2
Concessional	33.1	41.2	43.3	46.6	54.8	59.6	62.4	66.0	74.7	79.8	77.5
Bilateral	19.7	23.9	24.4	24.9	28.7	30.1	30.9	31.9	33.9	35.7	35.5
Multilateral[c]	13.4	17.3	18.9	21.7	26.1	29.6	31.5	34.2	40.8	44.0	42.0
Non-Concessional	27.4	34.0	33.1	33.1	36.7	36.6	35.8	34.5	35.5	37.4	40.8
Bilateral	14.4	18.7	18.8	20.0	22.9	23.0	22.9	21.8	24.2	25.1	23.9
Multilateral	6.9	9.0	8.5	8.6	9.7	10.0	9.9	10.0	9.9	9.8	9.5
IMF credit	6.1	6.3	5.8	4.4	4.1	3.5	3.0	2.7	1.3	2.5	7.4
Private creditors	22.2	24.8	24.2	24.4	25.2	24.9	23.7	23.7	22.8	23.4	22.9
of which:											
Bonds[d]	0.5	0.5	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.3	0.2
Commercial Bank[d]	7.4	8.3	7.9	8.1	8.7	8.3	7.9	8.0	8.3	9.4	9.5
Short-term debt	9.3	11.5	12.6	15.4	18.7	20.2	22.3	24.3	22.4	24.7	25.8
Memo items:											
Principal arrears on long-term debt	5.0	7.6	10.1	12.8	15.5	19.4	22.0	25.5	26.8	29.8	30.5
Interest arrears on long-term debt	2.2	3.4	4.8	6.6	7.9	9.8	11.4	13.8	14.0	15.2	15.6

Table A.36 (continued)

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996[a]
Asia											
Total external debt	343.1	394.7	406.5	458.9	517.0	562.8	610.8	658.9	719.2	777.5	856.9
Long-term debt	275.7	321.2	330.2	375.8	413.8	446.7	473.8	517.3	583.1	591.4	634.7
Concessional	96.5	117.1	122.1	155.7	174.5	184.8	190.8	204.0	224.4	219.9	214.4
Bilateral	70.1	86.8	90.2	121.1	134.4	140.2	142.9	152.2	165.1	158.0	149.4
Multilateral[c]	26.4	30.3	31.9	34.6	40.1	44.7	47.9	51.8	59.4	61.9	65.1
Official, non-concessional	62.2	71.3	67.8	68.1	75.3	80.9	87.2	98.6	114.4	101.7	106.7
Bilateral	19.1	20.8	20.4	20.3	20.6	21.9	26.3	33.2	43.6	34.5	38.5
Multilateral	31.2	40.1	40.2	42.2	49.1	53.4	54.1	58.4	64.0	62.1	64.4
IMF	11.8	10.4	7.2	5.7	5.6	5.7	6.8	7.0	6.7	5.1	3.7
Private creditors	117.1	132.8	140.3	151.9	164.1	181.0	195.9	214.7	244.3	236.6	269.9
of which:											
Bonds[d]	10.0	12.7	15.6	17.2	18.6	22.3	29.1	37.9	45.6	36.8	37.3
Commercial banks[d]	53.1	59.5	66.2	71.6	72.9	75.5	73.9	74.8	73.9	71.0	70.2
Short-term debt	67.4	73.5	76.3	83.1	103.2	116.1	136.9	141.5	136.1	186.1	222.2
Memo items:											
Principal arrears on long-term debt	2.3	3.4	3.4	4.6	6.2	9.5	11.8	12.7	17.0	19.7	22.8
Interest arrears on long-term debt	0.5	0.7	0.9	1.7	2.7	3.5	3.5	3.9	4.6	5.0	5.4
Least developed countries											
Total external debt	77.6	94.2	98.2	104.4	116.7	121.7	125.0	128.6	137.9	141.9	143.6
Long-term debt	71.2	86.3	88.8	93.4	103.8	107.3	109.0	112.3	120.3	124.2	125.2
Concessional	40.4	49.5	52.5	57.3	65.3	69.8	72.7	77.0	84.1	86.7	90.2
Bilateral	24.0	28.8	29.7	31.7	34.4	35.1	35.7	36.7	38.4	37.4	36.6
Multilateral[c]	16.4	20.7	22.9	25.6	31.0	34.7	37.0	40.3	45.7	49.3	53.5
Non-Concessional	19.5	23.2	22.4	22.3	23.7	23.0	22.2	21.1	21.7	22.7	20.8
Bilateral	12.2	14.9	14.8	15.4	16.8	16.8	16.4	15.6	16.2	16.8	16.2
Multilateral	2.6	3.1	3.0	3.0	3.3	3.1	3.0	2.9	2.9	2.9	2.6
IMF credit	4.6	5.1	4.6	3.9	3.6	3.1	2.8	2.5	2.6	3.1	2.0
Private creditors	11.3	13.6	13.8	13.9	14.7	14.4	14.1	14.3	14.5	14.8	14.3
of which:											
Bonds[d]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Commercial Banks[d]	3.2	3.5	3.4	3.3	3.5	3.2	3.0	3.0	3.4	4.3	4.6
Short-term debt	6.5	8.0	9.4	11.0	12.9	14.4	16.0	16.3	17.6	17.7	18.4
Memo items:											
Principal arrears on long-term debt	5.1	7.6	9.8	12.1	15.2	18.4	21.0	24.2	27.9	30.7	31.9
Interest arrears on long-term debt	2.2	3.2	4.3	5.9	7.3	8.8	10.2	11.9	13.8	14.5	14.9

Source: United Nations, based on data of IMF , OECD, and World Bank.

a Estimate.
b Debt of 122 economies, drawn primarily from the Debtor Reporting System of the World Bank (107 countries). For non-reporting countries, data are drawn from the Creditor Reporting Systems of OECD (15 economies), excluding, however, non-guaranteed bank debt of offshore financial centres, much of what is not the debt of the local economies.
c Including concesional facilities of IMF.
d Government or government-guaranteed debt only.

Table A.37.
DEBT INDICATORS AND DEBT-SERVICE PAYMENTS
FOR NET-DEBTOR DEVELOPING COUNTRIES, 1986-1996

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996[a]
Debt indicators ***(percentage)***											
Ratio of external debt to GNP											
All countries	44.3	49.3	44.8	43.0	41.8	42.3	41.1	42.0	40.4	39.5	37.0
of which:											
Latin America	63.4	65.5	56.4	49.9	46.5	45.5	42.6	41.4	38.6	41.0	41.4
Africa	64.1	70.5	70.8	72.3	68.4	70.5	68.0	70.1	75.6	75.3	68.7
Asia	26.6	31.3	29.0	29.9	30.2	31.4	32.0	34.2	33.2	30.7	28.2
Memo items:											
Sub-Saharan Africa	77.6	87.9	89.0	93.2	101.0	110.3	116.1	133.0	158.8	149.9	123.9
Least developed countries	81.8	95.2	99.8	101.2	103.7	116.1	126.2	139.3	155.6	143.1	116.7
Ratio of external debt to exports											
All countries	266.6	253.6	223.9	212.2	198.7	199.4	191.6	191.8	178.5	168.2	164.3
of which:											
Latin America	370.3	361.4	309.0	273.8	256.5	261.8	253.0	255.5	234.5	213.0	202.8
Africa	253.3	263.7	258.1	246.3	209.9	219.2	208.4	219.9	232.9	221.8	210.0
Asia	166.6	155.8	139.8	141.5	134.4	134.9	132.6	134.9	125.8	120.3	121.7
Memo items											
Sub-Saharan Africa	310.6	347.6	332.7	327.5	334.2	378.2	380.4	406.2	411.9	400.7	340.4
Least developed countries	499.8	538.2	504.6	508.1	461.3	562.0	543.2	562.8	557.1	516.6	411.2
Ratio of debt service to exports											
All countries	32.3	28.7	26.9	24.0	21.4	20.4	20.5	20.9	18.8	18.6	19.2
of which:											
Latin America	42.0	36.0	36.9	30.1	24.5	24.3	26.3	28.4	25.5	26.3	30.0
Africa	28.2	22.8	25.2	23.4	22.5	22.3	22.3	21.3	18.6	17.3	14.8
Asia	23.2	23.2	19.4	18.2	16.3	15.1	8.7	9.1	8.9	8.3	8.1
Memo items											
Sub-Saharan Africa	25.4	23.8	23.0	19.9	18.5	19.0	16.5	15.6	18.3	22.5	18.0
Least developed countries	27.3	22.9	21.1	20.6	15.6	17.5	12.7	12.9	13.1	22.6	15.7

Table A.37 (continued)

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996[a]
Debt-service payments ***(billions of dollars)***											
All countries											
Total debt service	118.6	125.4	133.6	132.1	135.6	134.8	147.6	160.5	166.7	189.8	213.3
Interest payments	58.8	57.4	65.6	62.1	60.5	62.3	61.4	61.9	68.4	81.1	85.1
of which:											
non-concessional	56.0	54.4	62.3	58.2	55.6	57.4	55.7	55.7	61.5	74.3	78.9
Latin America											
Total debt service	48.6	46.8	54.5	49.8	45.4	45.7	52.9	61.2	63.6	78.5	97.3
Interest payments	30.4	28.5	33.1	25.7	22.6	24.0	22.9	24.1	28.3	37.2	38.2
of which:											
non-concessional	29.9	28.0	32.6	25.3	21.7	23.1	21.9	23.2	27.3	36.3	37.4
Africa											
Total debt service	25.6	23.1	26.5	26.6	31.0	29.5	30.7	27.9	24.7	25.6	24.0
Interest payments	10.7	9.7	11.6	12.2	12.7	11.8	12.7	9.9	10.3	10.4	11.2
of which:											
non-concessional	10.1	9.1	10.9	11.4	11.6	11.0	11.3	8.4	8.5	8.7	9.4
Asia											
Total debt service	47.7	58.7	56.4	59.0	62.6	62.9	68.1	74.2	83.0	89.1	95.3
Interest payments	18.9	20.5	22.5	26.2	27.2	28.4	27.8	29.9	31.9	35.2	38.0
of which:											
non-concessional	17.2	18.6	20.3	23.6	24.3	25.2	24.5	26.0	27.8	31.1	34.3
Memo items											
Sub-Saharan Africa											
Total debt service	7.5	7.7	7.8	7.2	7.5	7.1	6.3	5.7	6.9	9.3	8.8
Interest payments	3.2	3.0	3.2	3.0	3.1	3.1	2.7	2.4	2.7	3.0	3.0
of which:											
non-concessional	2.9	2.7	2.8	2.6	2.7	2.6	2.2	1.9	2.0	2.4	2.3
Least developed countries											
Total debt service	4.2	4.0	4.1	4.2	4.0	3.8	2.9	3.0	3.2	6.2	5.5
Interest payments	1.6	1.6	1.7	1.6	1.5	1.5	1.1	1.2	1.3	1.7	1.6
of which:											
non-concessional	1.2	1.1	1.2	1.1	1.0	1.0	0.7	0.7	0.6	1.1	0.9

Source: United Nations, based on IMF, OECD and World Bank.
[a] Preliminary estimate.

Table A.38.
DEBT-RESTRUCTURING AGREEMENTS WITH OFFICIAL CREDITORS, 1986-1996

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Number of agreements											
Developing countries, total	19	17	15	24	17	14	16	10	14	17	15
Middle-income countries	3	4	3	6	1	2	4	1	2	1	0
Lower-middle-income countries	6	6	4	6	7	9	4	3	6	7	1
Low-income countries	10	7	8	12	9	3	8	6	6	9	14
Memo item:											
Sub-Saharan Africa	15	9	9	16	9	6	9	4	10	9	10
Amounts rescheduled[a] ***(millions of dollars)***											
Developing countries, total	12183	19969	9362	18600	6075	44308	12522	3394	14020	14163	11312
Middle-income countries	2201	6670	6721	6016	200	1825	7287	57	293	1030	0
Lower-middle-income countries	7502	10962	1342	9312	3320	34150	2628	2615	11360	11130	6724
Low-income countries	2480	1987	973	2518	2445	390	2607	722	1007	2003	4588
Memo item:											
Sub-Saharan Africa	9466	2904	1299	10330	3374	1810	3687	633	5289	3117	3570
Average consolidation period ***(years)***											
Developing countries, total	1.2	1.2	1.3	1.4[b]	1.5	..[c]	1.9	2.3	1.4	2.1[d]	2.3[e]
Middle-income countries	1.2	1.1	1.4	1.6	1.4	0.8	1.5	-	0.5	3.0	-
Lower-middle-income countries	1.2	1.4	1.4	1.4	1.4	..[c]	1.5	3.1	1.8	1.9	2.8
Low-income countries	1.2	1.2	1.2	1.3[b]	1.7	1.2	2.1	2.1	1.2	2.1	2.2
Memo item:											
Sub-Saharan Africa	1.2	1.2	1.2	1.3[b]	1.6	1.2	2.0	2.3	1.4	2.1	2.7

Source: UNCTAD, based on Paris Club Agreed Minutes.

Note: In 1995, Paris Club creditors introduced new concessional debt-relief measures for poor, severely-indebted countries, known as the "Naples terms". For the major features of current Paris Club rescheduling terms, see the report of the Secretary-General entitled "The developing country debt situation as of mid-1995" (A/50/379 and Corr. 1) of 31 August 1995, paras. 12-16 and table 2.

a Including previously rescheduled debt.

b Excluding Equatorial Guinea.

c Owing to the menu options for Egypt, it is not possible to calculate consolidation periods.

d Excluding Bolivia and Uganda both of which obtained a 67 per cent Naples terms stock reduction agreement.

e Excluding Benin, Burkina Faso, Guyana and Mali all of which obtained a 67 per cent Naples terms stock reduction agreement; and Ghana, which consolidated arrears only as of July 1995.

Table A.39.
DEBT-RESTRUCTURING AGREEMENTS WITH COMMERCIAL BANKS: ALL DEVELOPING COUNTRIES, 1986-1996

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996[a]
Number of agreements	12	19	10	4	5	0	1	-	1	1	2
Amounts rescheduled[b] (billions of dollars)	89.7	79.7	6.8	5.4	-	-	0.2	-	0.2	3.2	11.9
Average consolidation period (years)	4.0	6.5	3.3	7.3	-	-	4.0	-	..	..	..
Average repayment terms											
Maturity (years)	10	15	19	16	13	-	13	-	..	..	..
Grace (years)	4	5	7	5	4	-	3	-	..	..	..
Spread over LIBOR (percentage)	1.3	1.0	0.8	0.9	0.8	-	0.8	-	..	..	..

Concluded debt and debt-service reduction agreements *(billions of dollars)*

	1990				1991	1992	
	Mexico	Philippines	Costa Rica	Venezuela	Uruguay	Philippines	Nigeria
Debt reduction							
Debt buyback	-	1.3	1.0	1.4	0.5	1.3	3.3
Discount bonds	20.6	-	-	1.8	-	-	-
Debt-service reduction	22.4	-	0.5	10.3	0.4	2.6	2.0
New money	4.4	-	-	6.1	0.4	0.5	-
Total debt restructured	48.1[c]	1.3	1.5[d]	19.6	1.3	4.4	5.3
Total financing required	7.0	0.7	0.2	2.4	0.5	1.2	1.7
of which: own resources	1.2	0.05	0.04	0.4	0.3	1.0	1.7

	1993		1994		1995	1996	
	Argentina	Jordan	Brazil	Dominican Republic	Ecuador	Panama	Peru
Debt reduction							
Debt buyback	6.6	-	..	0.3	-	-	1.3
Discount bonds	12.2		4.0	0.5	2.6	0.1	0.9
Debt-service reduction	12.2	..	4.0	0.7	1.9	1.9	2.0
New money	-	-	4.0	-	-	-	-
Total debt restructured	27.0[e]	0.9	46.6	1.2	7.8	3.9	8.0
Total financing required	4.0	0.15	4.6	0.2	0.7	0.2	1.4
of which: own resources	0.8	0.15	4.6	0.2	0.1	0.14	0.6

Sources: Data of World Bank and IMF.
a In November 1996 Côte d'Ivoire reached a debt and debt service reduction agreement with commercial banks to restructure $7.2 billion of commercial bank debt. The deal is expected to close in 1997.
b Including previously rescheduled debt.
c Including portion ($693 million) not committed to any option.
d Overdue interest amounting to $114 million was converted into bonds by those banks that chose the buyback option.
e Total including $8.3 billion past-due interest.

IV. THE INTERNATIONAL OIL MARKET

Table A.40.
WORLD OIL DEMAND, 1987-1997[a]

Millions of barrels per day

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997[b]
Developed economies	36.4	37.5	37.9	38.0	38.2	38.9	39.1	40.0	40.4	41.1	41 ¾
North America	18.5	19.2	19.3	18.9	18.6	19.0	19.2	19.8	19.8	20.4	20 ½
Western Europe	12.5	12.7	12.8	13.0	13.4	13.6	13.6	13.6	13.9	14.1	14 ¼
Pacific[c]	5.3	5.6	5.9	6.1	6.2	6.3	6.3	6.6	6.7	6.7	7
Economies in transition	10.8	10.8	10.6	10.1	9.7	8.5	7.1	6.2	6.1	5.7	5 ¾
Central and Eastern Europe	1.8	1.8	1.8	1.7	1.4	1.4	1.3	1.3	1.4	1.4	1 ½
Former Soviet Union/CIS[d]	9.0	9.0	8.8	8.4	8.2	7.1	5.7	4.9	4.7	4.3	4 ¼
Developing countries	16.1	16.8	17.5	18.3	19.0	20.2	21.5	22.6	23.7	24.5	26 ¼
Latin America	5.0	5.0	5.1	5.2	5.3	5.5	5.7	6.0	6.1	6.4	6 ½
Africa	1.8	1.9	1.9	2.0	2.0	2.0	2.0	2.1	2.2	2.3	2 ½
Western Asia	3.1	3.1	3.1	3.3	3.4	3.6	3.9	4.0	4.1	4.2	4 ¼
Eastern and Southern Asia	4.2	4.6	5.0	5.6	5.9	6.5	7.0	7.4	8.0	8.6	9 ¼
China[d]	2.1	2.3	2.4	2.3	2.5	2.7	3.0	3.1	3.3	3.6	3 ¾
World total[e]	63.3	65.1	66.1	66.4	66.9	67.5	67.6	68.9	70.2	71.9	73 ½

Source: United Nations, based on International Energy Agency, *Monthly Oil Market Report*, various issues.
a Including deliveries from refineries/primary stocks and marine bunkers, and refinery fuel and non-conventional oils.
b Forecast.
c Australia, Japan and New Zealand.
d Estimates of apparent domestic demand are derived from production and trade data.
e Totals may not add up because of rounding.

Table A.41.
WORLD CRUDE OIL PRODUCTION, 1987-1997[a]

Millions of barrels per day

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997[b]
Developed economies	16.8	16.7	15.9	15.9	16.3	16.6	16.8	17.6	18.0	18.9	19 ½
Economies in transition	13.0	12.9	12.6	11.8	10.7	9.2	8.2	7.5	7.4	7.3	7 ½
Developing countries	31.4	33.9	36.3	38.0	38.5	40.0	41.1	41.9	43.1	43.7	45
OPEC[c]	19.7	21.8	23.8	25.1	25.3	26.5	27.0	27.3	27.8	27.8	28 ½
Non-OPEC developing countries[c]	11.7	12.1	12.5	12.9	13.2	13.5	14.1	14.6	15.3	15.9	16 ½
Processing gains[d]	1.2	1.2	1.3	1.3	1.3	1.3	1.4	1.4	1.5	1.5	1 ½
World total	62.4	64.8	66.1	67.0	66.8	67.1	67.4	68.4	70.0	71.4	73 ½

Source: United Nations, based on International Energy Agency, *Monthly Oil Market Report*, various issues.
a Including crude oil, condensates, natural gas liquids, oil from non-conventional sources and other sources of supply.
b Forecast.
c Ecuador is included in OPEC through 1992 and in non-OPEC developing countries starting in 1993. Gabon is not included in OPEC starting in 1995.
d Net volumetric gains and losses in refining process (excluding net gain/loss in the economies in transition and China) and marine transportation losses.

Table A.42.
OPEC CRUDE OIL PRODUCTION, 1996

Thousands of barrels per day

	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
Algeria	800	645	830	800	800	800	830	830	830	832	835	830	805
Indonesia	1 350	1 370	1 370	1 400	1 400	1 430	1 400	1 400	1 380	1 425	390	1 400	1 393
Iran (Islamic Republic of)	4 040	3 730	3 605	3 565	3 435	3 627	3 640	3 750	3 810	3 443	3 755	3 600	3 667
Iraq	550	550	550	550	550	550	550	550	550	550	550	800	571
Kuwait[a]	2 010	2 050	2 050	2 050	2 050	2 050	050	2 050	2 050	2 050	2 060	2 050	2 048
Libyan Arab Jamahiriya	1 390	1 390	1 390	1 390	1 400	1 400	1 400	1 400	1 400	1 400	1 400	1 400	1 397
Nigeria	2 000	2 000	050	2 050	2 060	2 010	1 980	1 970	2 090	2 140	2 130	2 140	2 052
Qatar	445	445	460	460	470	470	470	470	500	500	520	540	479
Saudi Arabia[a]	8 000	8 000	8 000	8 000	8 000	8 000	8 000	8 000	8 000	8 000	8 000	8 000	8 000
United Arab Emirates	2 160	2 180	2 180	2 185	2 195	2 206	2 200	2 200	2 190	2 200	2 200	2 200	2 191
Venezuela	2 900	2 900	2 970	2 970	3 020	3 020	3 070	3 070	3 100	3 100	3 200	3 200	3 043
Total	25 645	25 260	25 455	25 420	25 380	25 563	25 590	25 690	25 900	25 640	26 040	26 160	25 646

Source: *Middle East Economic Survey*, 13 January 1997.
[a] Including share of the neutral zone.

Table A.43.
VALUE OF OIL EXPORTS OF OPEC MEMBER COUNTRIES, 1960-1996[a]

Millions of dollars

	1960	1970	1980	1985	1988	1990	1991	1992	1993	1994	1 995	1996[b]
Algeria	106	681	12 971	9 668	5 725	9 588	8 464	7 885	6 902	6 335	7 008	8 420
Indonesia	221	446	15 595	9 083	5 042	7 404	6 714	6 619	5 693	6 005	6 441	7 730
Iran (Islamic Republic of)	723	2358	11 693	13 710	9 673	17 906	15 767	16 802	14 251	14 801	14 944	17 950
Iraq	445	788	26 096	10 097	9 312	9 594	351	4 82	4 25	421	4 61	550
Kuwait	855	1 619	18 935	9 451	6 840	6 385	874	6 224	9 708	1 0482	12 217	14 600
Libyan Arab Jamahiriya	9	2 356	21 906	12 132	6 070	10 715	10 212	9 326	7 689	7 170	7 763	9 300
Nigeria	13	716	24 931	12 568	6 267	13 265	11 792	11 642	11 510	11 040	11 724	14 800
Qatar	103	227	5 372	3 068	1 709	3 273	2 828	2 870	2 811	2 623	2 987	3 950
Saudi Arabia	682	2 418	108 175	25 937	20 205	40 130	43 701	44 754	38 621	38 586	42 502	51 000
United Arab Emirates	1	513	19 390	10 896	7 627	14 846	14 356	14 251	12 118	11 683	12 349	14 826
Venezuela	1 983	2 371	17 562	12 956	8 158	13 953	12 302	11 208	10 565	11 307	13 737	18 150
Total	5 150	14 555	282 625	129 567	86 629	14 7058	12 7360	132 063	120 292	120 452	132 133	161 276

Source: *OPEC Annual Statistical Bulletin*, various issues.
[a] Where appropriate, petroleum product exports are included. Data for some countries may include exports of condensate. Starting in 1980, Saudi Arabia data exclude natural gas liquids.
[b] Preliminary estimate by the United Nations.

UNITED NATIONS PUBLICATIONS
United Nations, Room DC2-0853, New York, New York 10017, U.S.A.

UNITED NATIONS PUBLICATIONS
Palais des Nations, 1211 Geneva 10, Switzerland

Printed in U.S.A. • 93116—June 1997—6,320
ISBN 92-1-109133-0 • Sales Number E.97.II.C.1
E/1997/50 • ST/ESA/256