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**PRIVATIZATION AND DEREGULATION OF
SELECTED TRANSPORT MODES**

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INTRODUCTION

Privatization in the general context of a national economic system concerns the transfer of ownership to the private sector of the fixed assets of a State-owned enterprise. It may also consist of the transfer of the majority of the production and/or distribution functions of goods and services from the public sector to private ownership. Deregulation means the release of industry, commerce and finance from government supervision and intervention. All the privatization and deregulation measures planned or undertaken by national economic policy makers should be seen as an integral part of economic, financial and monetary policies aiming at economic adjustment and reform in any given country. As such, privatization is closely linked to the relative roles of the public and private sectors in the economic process. Since the boundaries between the State and the private sector are never clearly defined and vary widely from country to country, the discussion of issues pertaining to privatization must take into account not only the socio-economic sectoral approaches but also the political, social and economic conditions, needs and priorities prevailing in the countries concerned.

The international community, while reaching a global consensus on the International Development Strategy for the current United Nations Development Decade (1 January 1991 to 31 December 2000) has, *inter alia*, defined the goals and objectives of the above strategy in the light of the relative roles of the public and private sectors as well. General Assembly Resolution 45/199 of 21 December 1990, adopting the International Development Strategy for the Fourth United Nations Development Decade, emphasized that, to hasten industrialization, the capabilities of the private sector should be enhanced, private entrepreneurship encouraged, and at the same time, appropriate measures should be taken to increase the flexibility and efficiency of industries under public ownership.

Since the above statement is also fully valid for all production and service industries and activities as well as for the human development process,^{1/} the definition of the role of the public and private sectors in the development field remains one of the fundamental bases for national economic and social policies during the 1990s.

Within the same context at the ESCWA regional level, the role of the public and private sectors in the development process was also debated during the Meeting of Eminent Persons on the Medium-Term Plan (1990-1995), held in Amman 29-30 January 1987: "This debate brought out the need for an examination of the role of the public and private sectors in the development process and of the manner in which the private sector might be encouraged to take upon itself a more extensive role therein through the removal of bureaucratic

^{1/} As defined by the United Nations Development Programme (UNDP) in its annual Human Development Reports, human development encompasses the improvement in people's lives -- not only in terms of income, but also in terms of health, housing, education, opportunities for work and possibilities for leisure, equity, human rights and political and economic freedom.

restrictions and the establishment of a suitable climate for private enterprise."^{2/}

Another issue within the above framework is the transformation of centrally planned economies into market economies. Privatization has become a major theme for the transition now experienced by the Eastern European countries and by the newly established States following the collapse of the former Soviet Union. Rethinking the State's role in socio-economic spheres as well as privatizing and reforming State-owned enterprises are the central issues in this respect.^{3/}

In the 1980s and 1990s, transferring State-owned enterprises to the private sector has been and will continue to be an important government objective in Western countries and in some developing countries. In most of these countries, privatization has meant much more than merely transferring assets to the private sector. It has been part of a broader exercise aimed at stabilizing and liberalizing their respective economies on several fronts: regulation, prices, trade and finances. Thus, privatization was seen as a part of wider reform schemes. It has, however, proven to be an arduous exercise. The combined effects of thin markets for domestic capital, adverse economic conditions and resistance from trade unions and civil servants have slowed the process. Legal issues also complicate privatization; cancellation of sales of public enterprises by the courts, the need to pass constitutional amendments, redefining of property rights, establishment of new guidelines for private ownership, and protecting minority shareholder interests have created legal problems to be solved during privatization.

Privatization, at present, remains necessary and highly desirable for many countries. It is one of the main vehicles to optimum and efficient utilization, financing and management of resources. Removing price distortions and price controls is essential for privatization, leading to more efficient production and services. Correct decisions on investment and production cannot be made unless prices are true indicators of cost and consumer demand, and the right to ownership of the production factors is secured. This again requires timely decisions on privatization.

Privatization and deregulation issues in the Arab countries were addressed at the Seminar on Privatization and Structural Adjustment in the Arab Countries, held at Abu Dhabi, United Arab Emirates from 5 to 7 December 1988 and organized jointly by the Arab Monetary Fund, the United Nations Development Programme (UNDP), the United Nations Economic and Social Commission for Western Asia (ESCWA) and the International Monetary Fund

^{2/} United Nations Economic and Social Commission for Western Asia, Meeting of Eminent Persons on the Medium-Term Plan, 1990-1995, Amman, 29-30 January 1987, United Nations, New York 1987, p. 8.

^{3/} World Development Report 1991, World Bank, 1991, p. 129-147. See also: World Economic Outlook, International Monetary Fund, October 1991 and Economic Survey of Europe in 1990-1991, Economic Commission for Europe (ECE), United Nations, 1991.

(IMF). The findings and results of this seminar provide basic indications and give a general review of the reasons underlying privatization policies.^{4/}

In the ESCWA secretariat, under the umbrella of current issues of importance to the ESCWA region, a note on privatization was presented to the fifteenth session of ESCWA in May 1989.^{5/} This document included four chapters dealing with:

- (a) International and regional economic developments and policies of economic adjustment and reform in ESCWA countries;
- (b) The importance of the public sector for national development efforts in ESCWA countries;
- (c) The private sector and the market economy in ESCWA countries;
- (d) The factors leading to privatization.

The report was discussed during the session under agenda item 9, but at the end of the deliberations no decision or action was decided upon or further envisaged.^{6/}

Liberalization of the economies in the ESCWA region was also introduced as an important objective in the current ESCWA Medium-Term Plan for the period 1992-1997. Under the objectives of subprogramme 2, "Development issues and policies", the Medium-Term Plan emphasizes that "analysing and evaluating the policy measures introduced to liberalize the economies of the region and assess their impact on the promotion of growth, economic and social development, cooperation and integration at the subregional and regional levels is a priority objective."^{7/}

In a more precise fashion, and in connection with the objectives of the Medium-Term Plan, the ESCWA secretariat's coordinating role pertaining to privatization issues was defined as follows: "To manage wisely the process of privatization, taking into consideration the weak base of the present private sector and the necessity of supporting and increasing the efficiency of certain public-sector activities."^{8/}

^{4/} International Monetary Fund, Privatization and structural adjustment in the Arab countries, Said El-Naggar, ed., 1989.

^{5/} See E/ESCWA/15/7 of 30 March 1989.

^{6/} See the report of the fifteenth session; E/1989/36, E/ESCWA/15/8, p. 11, para. 65-84.

^{7/} ESCWA, Medium-Term Plan for the period 1992-1997, revised version, E/ESCWA/PPTCO/1992/IG.1/3/REV.1, May 1992, p. 9.

^{8/} Intergovernmental meeting to review the Medium-Term Plan for the period 1992-1997, held at Cairo 8-9 February 1992. E/ESCWA/16/4/Add.8, 21 June 1992, pp. 2-3.

As regards the particular aspect of privatization in the transport sector, the preparation of a technical report on privatization and deregulation of selected transport modes has been foreseen within the framework of the 1992-1993 work programme of ESCWA.^{9/}

Within the framework of the present document, two transport modes have been selected: (1) road transport, and (2) air transport. In fact, road and air transport in the ESCWA region are the two subsectors experiencing the most active and relevant privatization and deregulation measures. Since the transport sector is the major technical, economic and service activity, linking all the socio-economic components of the development process, the experience of this sector may be of importance to all the other socio-economic sectors in ESCWA countries. Moreover, a general discussion of the privatization issue in the transport sector may also facilitate comprehension of the impact of privatization and deregulatory policies on other socio-economic spheres.

In this context, two case-studies have been especially prepared for the present document: one dealing with road transport and the other with air transport. These will provide the necessary elements to examine and discuss the particular aspects of private financing and the details of privatization and deregulation in the transport subsector. Also, on the basis of these two case-studies, the objectives, scope, present institutional transport organization, and the specific ways and steps of implementation as well as the impact of the privatization and deregulation are briefly analysed.

^{9/} ESCWA Transport and Communications Division work programme for the biennium 1992-1993, A/C. 5/46/18, of 1 November 1991, p. 87.

I. OBJECTIVES, SCOPE AND PARTICULARS OF PRIVATIZATION AND DEREGULATION IN THE TRANSPORT SECTOR

Regulatory systems are part of the transport policy frame and are designed to ensure proper resource allocation in the transport sector through interventions in the transport market, e.g., by setting reasonable and fair prices, avoiding excessive competition by restricting entry into the transport sector's operations and activities and ensuring optimum coordination. The regulatory systems cannot be isolated from the general market mechanism; they interact with prices and with other regulations in the economy, and they contribute to overall economic performance. They are the basis for privatization and for possible or desirable deregulatory actions.

Transport industries are regulated and controlled by Governments through the control of quantity (control of entry) and quality of services and through traffic and safety regulations.

Changes in current regulation practices could include, inter alia, the following:

(a) Easing control over entry into the transport industry, especially with regard to small-scale operators willing to render services over routes and areas which are not adequately served;

(b) Easing constraints, such as prohibition of the carriage of goods in passenger vehicles and vice versa, or forbidding the owner of a vehicle to transport goods not produced by him;

(c) Easing requirements relating to the quality of services (such as the number of passengers carried) which are often unreasonable under the conditions of developing countries;

(d) Reviewing fare regulations, with the objective of providing operators with incentives to serve selected areas;

(e) Limiting the use of private automobiles in congested urban areas through traffic and parking constraints;

(f) Introducing preferential treatment for high-occupancy public transport vehicles through traffic management measures.

As regards specifically the highway and road sectors, the most important regulatory policy topic is "access control", which comprises all direct administrative restrictions on the use of the road infrastructure. Access control takes the following forms:

(a) Minimum vehicle standards (weight restrictions, maximum axle-load regulations, etc.);

(b) Restricted vehicle admission (usually confined to high-standard roads);

(c) Time restrictions (prohibition of traffic at night and/or on weekends or during given hours of the day).

Within the general framework of transport policy, the public sector's involvement -- mainly through regulatory measures -- aims at (a) using public funds for investment in and maintenance of transport infrastructure and equipment, and (b) implementing rules and regulations for the transport sector. Free and fair competition also becomes an instrument of transport policy when the Government decides to use it. The purpose is to regulate the sector in such a way that either efficiency or increased productivity is attained through competition, which might contribute to optimum or desirable changes in the modal split as well.

Privatization and deregulation in the transport sector are equally an integral part of the structural adjustment packages which entail the substitution of new policy frameworks for the now discredited experiments and aim to establish a balance between government revenues and expenditures and to enhance competitiveness in order to promote private enterprise. To achieve the maximum benefit from structural adjustments, the Government could and should provide a stable policy environment and improve its capacity to support and guide the private sector.

Deregulation and privatization of the transport sector must also be considered as transport policy reforms. Table 1 indicates the effects caused by such policy changes.^{10/}

Moreover, the financial impact of privatization comprises the resulting net change in government revenue before and after privatization, in addition to change in net government wealth, i.e., the change in the Government's financial assets after the sale.^{11/}

Another scope of privatization aims at financing the transport system. In many developing countries burdened with debt and critically short of public funds, greater amounts of private capital may provide additional financing for the transport sector. An example of this is the issuance of income-sharing certificates that generally have a real (tax-exempt) return higher than those yielding a fixed return plus a bonus proportional to the gross revenues generated by large transport infrastructure projects.

The introduction of user charges may also increase self-support in the transport sector. Increased private financing together with direct investment by private firms (national or international) could alleviate the high construction and maintenance costs of the publicly provided infrastructure.

^{10/} Ian G. Heggie, "Designing major policy reform: lessons from the transport sector", World Bank Discussion Paper No. 115, Washington, D.C., 1991, p. 8.

^{11/} Peter S. Heller and Christian Schiller, "The fiscal impact of privatization, with some examples from Arab countries", "Privatization and structural adjustment ...", International Monetary Fund, 85 ff.

Table 1. Effects of policy changes

Policy change	Socio-economic benefits/costs	Government's fiscal balance	Country's balance of payments
Deregulation of transport industries	In the long-term, better use of assets and quality of service. Transport costs should be reduced. Loss of jobs possible.	In the short-term, the finances of public transport enterprises are likely to deteriorate.	In the short-term, relaxation of industry entry requirements is likely to increase vehicle imports.
Privatization	In the long-term, use of assets should improve and costs should fall. Some jobs will disappear.	Should have an immediate positive impact on government revenue, which may be partly offset by the cost of establishing a labour redundancy scheme.	May increase imports as the privatized enterprise procures spare parts and replaces worn or obsolete assets.

Source: United Nations Economic and Social Commission for Western Asia.

Equally important is the establishment of a realistic timetable for reform in the transport sector, including privatization and deregulation. The amount of time needed depends on the Government's legislative and administrative structure and the way in which the necessary political consensus is developed. Selected World Bank studies in both developing and developed countries suggest^{12/} that in some developing countries the deregulation of road transport took approximately 12 years to complete.

The results in developed countries were not significantly different: for example, deregulating the transport sector in the United States took more than 13 years; in the United Kingdom, deregulation of the bus industry has taken more than 10 years.

The same case-studies referred to earlier also confirm a standard pattern for implementing reforms. This pattern includes (a) discussion leading to agreement on the need for reform, (b) studies, (c) consultations with the parties concerned, (d) changes in legislation and (e) new administrative arrangements. The implementation of typical transport policy reforms generally takes at least 10 years.

^{12/} Ian G. Heggie, "Designing major policy reform", pp. 11-12.

The same case-studies referred to earlier also confirm a standard pattern for implementing reforms. This pattern includes (a) discussion leading to agreement on the need for reform, (b) studies, (c) consultations with the parties concerned, (d) changes in legislation, and (e) new administrative arrangements. The implementation of typical transport policy reforms generally takes at least 10 years. Table 2 shows the typical amount of time needed for such major reforms as the privatization of public transport enterprises and the deregulation of the road haulage industry and public bus companies to overcome administrative, organizational and political impediments or constraints.

The recent tendencies concerning the privatization of national economies in general, and the privatization of transport modes in particular are reflections of new trends emerging at the global level, such as the New World Order, the end of centrally planned economies, increasing basic needs in least developed countries, greater concern for human development, restraining the deterioration of the physical environment, a new development process more responsive to social needs, strengthening cooperation in international development and humanitarian aid as well as increasing global involvement in peace-keeping and the preservation of human rights. In each of the above fields, the transport sector, with its infrastructure, organizational institutions, operations and networks, has a decisive and linking role to play; without the involvement of the transport sector, none of the above concerns and activities could be considered or implemented.

There is, however, an important issue to be underlined: the New World Order, with its various and as yet inadequately defined elements and ramifications, does not imply a total shift towards rapid and definite reforms including privatization and deregulation. The two latter issues are to be seen rather as part of the liberalization process in socio-economic and human development, subject to various degrees of implementation according to each country's requirements and conditions. Also, they do not entail the total disappearance of the State or of the public sector, which will continue to play a major guiding and regulatory role in the economic production and distribution process as well as in the social welfare context.

The increasing human tragedy in some of the least developed regions of the world as well as the latest failure of social policies in some of the most developed industrialized countries in the world^{13/} underlines the importance of public-sector involvement. It is therefore imperative that the ESCWA region, with its particular socio-cultural heritage and financial, natural, and human resources, consider privatization and deregulation issues according to its own requirements and interests without any "extreme" approach.

Besides the regional approaches, the national and sectoral realities, priorities and aspirations should guide the privatization measures and determine their extent as well.

^{13/} John K. Galbraith, The Culture of Contentment (New York, 1992). This book, by one of the most prominent writers on socio-economic issues of our times, is the latest in a series of publications voicing concern about the aforesaid critical situation in highly developed countries.

Table 2. Typical time needed for selected policy reforms
(Years)

Impediments/ constraints	Administrative			Organizational			Political			
	Requires changes in laws and legislation	Requires changes staffing or organization of government or agencies	Affects consulta- tions with other depts. or agencies adversely	Affects established dept.1 interests	Affects interests of other depts. public agencies	Affects other national policies	Affects small number of interest groups	Involves large number of interest groups or some major groups	Minimum major political conflicts	total time required
Deregulation of the road haulage industry	1.0-2.0	1.0-2.0	0.5	1.0	0.5-1.0 (0.5-1.0)	(0-1.0)	0.5	-	-	5.0
Privatization of public transport enterprises	1.0-2.0	(1.0-2.0)	(0-0.5)	(0-1.0)	(0.5-1.0) 0.5-1.0	(0-1.0)	-	1.0	(1.0-2.0)	5.0
Deregulation of public bus companies	1.0-2.0	1.0-2.0	0.5	1.0	- (0.5-1.0)	1.0	-	1.0	(1.0-2.0)	7.0
Average amount of time likely to be taken by each activity	1.0-2.0	1.0-2.0	0.5	1.0	0.5-1.0 0.5-1.0	1.0	0.5	1.0	1.0-2.0	

Source: Ian Heggie, "Designing major policy reform: lessons from the transport sector", World Bank Discussion Paper No. 115 (Washington, D.C., 1991), p. 8.

Notes: Figures in brackets indicate that this activity may not always be involved when policies are reformed. These figures exclude the time spent on initial dialogue and the examination of options. The summation assumes that activity times are additive and there are no slippages.

Moreover, deregulation must be considered as an end-product of the general commitment to laissez-faire and as a specific commitment to the market. However, the objectives and the degree of deregulatory measures should be well defined and their sectoral impact well analysed before concrete actions are taken.

In many cases, particularly in the transport sector, public service features are predominant, and the utility regulation is desirable and normal. It is therefore necessary to undertake an in-depth analysis of the pros and cons of deregulation before embarking on concrete actions and decisions.

Security and safety, in addition to public utility, are the major arguments which must be taken into consideration while discussing the details of any deregulation in the transport sector. In particular, recent experiences in the air transport industry suggest that haphazard and rapid deregulation may easily lead to financial devastation of some airline companies, allowing surviving airlines to create an exploitative monopoly.

Privatization and deregulation are to be seen in the context of a "mixed economic system" whereby both the public and private sectors' roles in the economic life and process are defined. The extent and the level of privatization and deregulation measures should be examined first within the mixed economic concept, then according to the particularities of each economic sector or activity and should be based on the political systems.^{14/}

One should likewise bear in mind that, in times of economic recession or during reconstruction periods, increased expenditure of public funds, especially on the transport infrastructure, is needed. Government action is also unavoidable and indispensable to correct the deeply inherent and self-destructive tendencies of the economic system. Within the above framework, once again, privatization and deregulation are two issues where policy must be implemented with extreme prudence.

In some sectors, notably in manufacturing and agriculture, privatization and deregulation may help to correct market failures. In these sectors, however, government intervention may also worsen distortions and disrupt economic efficiency by using bureaucratic management styles or by creating monopolistic elements. Conversely, in infrastructure sectors including transport, government intervention may be viewed as "desirable" because it may help to restore the conditions required for economic efficiency and social benefits. The government's role in transport, via projects, programmes and policies, is therefore essential. Any attempt at deregulation or privatization should keep in mind these facts, and they should be envisaged only if the public sector fails to correct market (transport supply and demand structures) failures (i.e., when the prices paid lead to consumption and production decisions which do not contribute to national economic efficiency) or disrupts otherwise efficiently functioning transport operations.

^{14/} The ultimate goal of all nations on earth seems to be the establishment of liberal democratic States with liberal economies based on full separation of executive, legislative and judiciary powers. A mixed economic system, with well-defined roles for its public and private sectors, must be considered as a part of this general, liberal democratic scheme.

Political factors influence the roles of the public and private sectors and the transport industry structure overall. Nevertheless economic and technical efficiency remains the main objective of the transport sector's networks and operations. The extent to which market forces alone can and should influence the roles of State and public enterprise must be carefully considered. In the transport sector, some regulation may always be appropriate, and competition, even if encouraged, will continuously require safeguards to ensure fairness and efficiency. Only in recent years has the deregulation of some transport modes (mainly road transport) been achieved in the United States,^{15/} Canada and Australia. Many Western European countries still maintain measures of regulation.

Developing countries particularly should treat deregulation, highly desirable as it is in many respects, with much caution. The pressure placed by any kind of deregulation on transport operators may be enormous; only the most stringent enforcement can prevent gross overloading, inadequate vehicle maintenance and traffic safety, speeding and undesirable environmental effects.

^{15/} An in-depth analysis of the deregulation policies within the framework of politics in the United States further suggests that willingness of the legislative powers (Congress) representing the national political consensus is the essential ground upon which deregulatory actions are based. The same study indicates that each deregulation case has its own dynamics, momentum and outcome depending on the deregulated economic activity. Moreover, in the United States procompetitive deregulations carried structural rearrangements including elaboration of anticompetitive regulations as well as redefinition of economic interests represented by various groups and industries. (M. Derthick and P.J. Quirk, The Politics of Deregulations, Brookings Institution, Washington D.C., 1985.)

II. EFFECTS OF DEREGULATION

Policies pursued in various Western countries on the deregulation of the transport sector suggest that various effects of deregulation have been experienced at different levels by all these countries:

- (a) The effects of deregulation on the pricing of the transport sector are mostly geared towards a regulated system of subsidies, favouring underused transport networks. Although deregulation concerns the revision of fare structures, any major change in tariffs is not easily detectable;
- (b) Deregulation policies enable some operators to diversify their fare structures, which may become economically competitive and favourable for the users;
- (c) Deregulation must be gradual, and monitoring of markets' reaction to deregulatory measures is essential. These imply medium- and long-term examination since deregulation can take several years;
- (d) Transport policy makers, while implementing deregulation policies, are increasingly concerned with the concentration of economic activities in terms of space allocation. In particular, the "spatial" effects of deregulation on airports and urban transport are highly relevant. In airport design and urban planning the possible effects of deregulation must be taken into account;
- (e) Deregulation may lead to a lack of safety. Radical deregulation measures should therefore be accompanied by strict technical controls, by controls on the length of time spent driving and by other safety controls;
- (f) The potential scope of deregulation of air transport concerns the strengthening of competitiveness. However, the profits expected from competition do not always materialize, and close monitoring is necessary, especially in cases where mutual "open skies" agreements are adopted, allowing national airlines unrestricted access to each other's home markets;
- (g) The deregulation of the road subsector may contribute to more selectivity and competitiveness for the railways, both in passenger and freight traffic. This will, in the long run, benefit those market segments that are most advantageous to rail transport;
- (h) In countries where deregulation measures had already been in effect for some time, a destabilizing effect on employment in the transport sector was observed. The increased productivity approach, change in salaries, etc., were indeed the main factors affecting the transport labour market;
- (i) Since the deregulatory changes are destabilizing by nature, even a gradual approach should elicit a great deal of opposition from existing pressure groups. An adequate legal framework for the deregulation process is therefore required;

(j) Coexistence of regulated sectors with deregulated sectors is another problem area which may cause perverse economic practices to avoid the effects of regulations. Additional controls to scrutinize the effects of deregulation are needed;

(k) Deregulation generally promotes technical innovation; for example, the removal of standard tariffs may facilitate modernization of railways on busy routes, or deregulation of the transport of goods may increase combined transport if the transport licences were previously granted on a modal basis.

The main problem of deregulation faced by Governments remains the same: to define the conditions under which deregulation can be accepted and encouraged without damaging the general intermodal balance of the transport system. It is therefore necessary to follow a gradual and well-defined course of action for deregulation in the interest of both users and operators.

III. FINANCING OF TRANSPORT PROJECTS AND THE PRIVATE SECTOR

One of the major objectives of privatization and deregulation in the transport sector is to encourage the private sector to participate in the financing of transport projects. As the transport sector is a basic infrastructure with a considerable impact on society, investments are essentially realized by the public sector, which also provides its financial resources. The transport services offered are also public services, and pure free-market principles cannot be entirely applied to the transport sector, mainly because the pricing mechanism of market economies inadequately balances the cost/benefit structures of transport operations.

Besides the socio-economic needs of the users, there are also public policy factors that influence financial decision-making and the setting of financial objectives related to the transport sector. These include the need to maintain national prestige, political pressure from politicians looking for votes, etc.

However, the increasing shortage of public revenues in almost every country has led to cuts in public expenditures on public transport infrastructure building and maintenance. Diminishing public funds for the transport sector are largely the result of shortages in fiscal revenues, but the following can also be cited as reasons for deficits in the public transport sector: poor financial performance of the public transport infrastructure, poor financial management of public transport operations, ineffective application of the user charges principle, and inefficient revenue administration in public transport enterprises.

Under the above circumstances, two types of remedy may be foreseen: (a) improvement in the transport sector's finances and financing methods; (b) encouragement of private-sector financing in and for the transport sector. The latter is the main issue discussed within the framework of the present chapter.^{16/}

To encourage private-sector investment in the transport sector, the first priority should be the identification of conditions under which the private sector might be willing to finance the public transport infrastructure. In fact, the private sector must be convinced that its investment will be a profitable one.

Most of the schemes involving private-sector financing of the public-transport infrastructure can be provided by the private sector on the basis of a franchise granted by the Government (on a negotiated or competitive basis) to design, construct, finance and operate the public transport infrastructure for a specified number of years. Revenue for the projects

^{16/} This chapter partly draws on the findings of the seminars organized by the Planning and Transport Research and Computation International Association (London) held at the University of Sussex (UK) in 1989 and 1990 (see also the bibliographic sources to the present study).

would come either from user fees, tolls, or surrogate tolls. The latter method involves payments by the Government over a number of years (usually 20 years) according to the number of vehicles counted using the road.

Involving the private sector in the public transport infrastructure offers a number of advantages: It can (a) mobilize additional sources of financing; (b) pass project risks on to a private-sector entity; (c) draw on the management and technical skills of the private sector for the identification, planning, design, construction and operation of project facilities; and (d) ensure that the engineering design is tailored to better suit the demands of the market. In return, however, the private-sector entity originating the scheme generally expects a clear franchise, a reasonably stable business environment and a bidding procedure which offers some form of protection from subsequent open competition.

The above-mentioned types of private-sector involvement can be more readily negotiated in countries where there are willing investors and where financial markets are reasonably well-developed. When there is a scarcity of domestic financing sources leading to the need to involve foreign investors, such projects may not be suitable for private-sector financing. Much of the project revenue is generally in domestic currency, and it is difficult to negotiate foreign-currency funding which would avoid an unacceptable foreign-currency exposure or, from the Government's point of view, an unacceptable foreign-currency guarantee in the concession agreement.

The full involvement of the private sector in the transport investment sphere would require the establishment of a business sector with companies specializing in the development and operation of the transport infrastructure as well. Otherwise, transport projects would be in the hands of non-specialized or opportunistic business entities.

Arguments have also been advanced in favour of the private sector for such reasons as higher efficiency, reduced financial risk, additional funds from a large number of private investors, absence of bureaucracy and fewer labour conflicts. These factors could contribute to the desired participation of the private sector in transport financing.

Obviously, the use of private-sector funds for the provision and operation of transport facilities does not fully remedy the financing problems of the transport sector. Under the right circumstances, however, the private sector can play a useful and successful role in supplementing public investment schemes. The adoption by the Government of the relevant procedures and an appropriate legal framework to deal effectively with competition and exclusivity, and, above all, the creation of an environment conducive to private-sector investments are prerequisites for the private sector's involvement in the transport sector.

Even if private-sector projects are implemented and become operational, an appropriate regulatory framework should still be available to ensure that the public interests of these projects are preserved.

Within the framework of the transport sector's financing by the private sector, there are also new approaches that have recently been proposed and

envisaged.^{17/} In this respect, the most important issues are: initiating and developing cost-sharing partnerships between the public and private sectors, establishing multinational outreach programmes aimed at the exchange of technology and expertise for the enhancement of transport networks, and providing advisory services on legislative and regulatory reform requirements while fostering joint public-private transport ventures.

As regards the road networks specifically, shifting the responsibility for financing, building and operating such an infrastructure to private-sector entrepreneurs is often insufficient to set a new course of market-based transport policies, because many established interest groups, prevailing laws and administrative mechanisms tend to mitigate new private-sector initiatives. For example, opportunities for toll-road investment in developing countries, a possible solution to the problem of attracting private-sector financing, which would in turn be covered by revenue from tolls, are still difficult to find. Only if road projects are considered as part of larger investment schemes such as natural resources and real estate developments or improvements in the physical condition of any given space or area and regional land-use projects, can the financial viability of these transport initiatives be secured. Private financing could also be available then, for example, for toll-road construction or any other transport concession scheme.

As regards the details of private financing of road transport infrastructures, a specific research paper with a case-study on toll roads in Egypt is provided in annex I. This annex, together with the second case-study on privatization and deregulation in the air transport subsector, illustrates privatization, deregulation and private-sector financing in two key transport subsectors highly relevant to Western Asia.

^{17/} Infrastructure Finance: the Magazine for Global Development, published quarterly by Institutional Investor, Inc., New York, Fall 1992, pp. 51-52.

IV. CONCLUSIONS

The better functioning and optimum participation of private entrepreneurs may help to promote more efficient resource allocation and greater dynamism in the transport sector. Regulatory and domestic competition policy reforms alongside public-enterprise reforms and privatization programmes, support for private delivery of public transport services accompanied by training activities, and market-based financing and credit facilities may contribute to increased private-sector involvement in the field of transport.

Studies and action pertaining to trade and financial reforms may also lead to significant progress towards the transport sector's liberalization and deregulation. Moreover, the restructuring of public- and private-sector roles and an improvement in the efficiency of the financial system as well as a better regulatory and legal environment for private business opportunities could facilitate privately-funded transport-sector development.

Greater private-sector provision of transport services may be encouraged by shifting the boundary between the public and private sectors so as to increase cost-effectiveness and better use of capital, manpower and other resources in both Government and business. Privatization can open new opportunities for private investors, particularly in transport operations, and it can free public-sector resources and administrative skills for other priority projects and programmes.

Since an efficient and dynamic financial sector is crucial to a growing market-oriented economy, including an appropriate transport infrastructure with its operations and management, financial-sector reforms are often necessary to raise the efficiency and effectiveness of resource mobilization from, and allocation to, the private sector. The mostly widely used policy instruments to promote public-sector reforms leading to privatization include studies, policy dialogue and technical assistance. As the process of privatization is a long-term exercise, in-depth assessment of the private sector and long-range approaches are required. As the experiences gained in several countries suggest, and also according to the findings of the World Bank, there are several issues to be taken into consideration when envisaging the privatization of transport-sector operations:

- (a) The country's overall policy framework should be market-friendly;
- (b) State-owned transport enterprises functioning in competitive markets are prime candidates for privatization;
- (c) An appropriate regulatory framework must be in place before privatizing monopolies which may still exist in the transport sector;
- (d) The primary objective of privatization should be to increase efficiency, not to maximize revenue;
- (e) Large investments in privatization candidates should be avoided;
- (f) Labour does not lose in privatization if Governments pay sufficient attention to easing the social cost of unemployment;

(g) The cost of privatization should be set according to explain market rules, and all privatization transactions must be transparent.

Privatization and deregulation must be implemented with extreme prudence. In times of economic difficulties or during reconstruction periods (which is largely the case in the ESCWA region) increased expenditure of public funds, especially on transport infrastructure, is required. Security and safety, in addition to public utility, are needed, particularly in the transport sector. It is therefore advisable to proceed very cautiously with privatization and to keep the basic regulatory schemes operational.

In the final analysis, the privatization and deregulation of the transport sector should (without demaging the public utility and social aspects of transport services) lead to more efficient transport operations and should facilitate the private sector's participation both in the financing and the operational spheres of the transport sector.

When formulating and implementing any given privatization and deregulation strategy for transport operations, the possible effects of this strategy, as underlined in the present study, should be taken into account.

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Annex I

**PRIVATE FINANCING OF ROAD TRANSPORT INFRASTRUCTURE
(WITH EMPHASIS ON ROAD-USER CHARGES)**

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INTRODUCTION

Over the past two decades most ESCWA member countries have invested heavily in their transport infrastructures, including the building of roads, railways, ports and airports. In the road-transport subsector, at the national level in almost all the countries of the region there now exist comprehensive road networks built according to international standards. At the regional level, apart from a few missing links, most ESCWA countries are interconnected through a vast road network.

At the same time, there has been a substantial increase in car ownership that has surpassed all expectations. With railways having only a limited share of surface transport in certain countries, road transport has acquired the biggest share, especially in the field of freight transport.

Most road links in the region are characterized by low traffic volumes, as they were originally built (in most cases) to satisfy criteria other than economics. Spare capacities appear to exist that could cover future increases in demand for many years to come. The main concern of road authorities has now shifted to maintenance rather than new construction.

For the road authorities, however, the situation has changed dramatically over the past five years or so. A shortage of public revenue in recent years has led to cuts in public expenditures, including those on the transport infrastructure and more importantly on maintenance of that infrastructure. Although some of the cuts were justified in terms of economic efficiency, other, much deeper cuts have had a noticeable effect on the quality of the transport infrastructure.

The World Bank recently published a policy paper on road deterioration and found that, in 85 countries one fourth of the paved roads outside urban areas needed to be upgraded or reconstructed. Shortages of public revenues have added to the difficulties in financing modernization and expansion of the public transport infrastructure; the result has been a drop in the quality of service as well as growing congestion. It is considered that an inadequate, inappropriate, or poorly maintained infrastructure can seriously hamper economic growth.

However, in the present context, Governments cannot continue to use general tax revenues to supplement the operation, maintenance and modernization of the public transport infrastructure. Indeed, many Governments expect revenue-earning sectors like transport not only to cover their own costs but also to make a net contribution to general tax revenues. To ensure that the public transport infrastructure continues to make an appropriate contribution to the Government's general tax revenues and facilitates long-term economic growth, the sector needs to become more financially self-sufficient. It can do this by, among other things, improving operational efficiency and exploring more innovative financing mechanisms.

The present study concerns itself only with ways and means of generating additional revenues.

I. THEORETICAL APPROACH

A. Generating extra revenue

Most Governments are interested in generating extra revenue to support the overall physical investment strategy and to finance the operation, maintenance and modernization of the public transport infrastructure. Key factors to be considered relate to the average level of taxation that a country can impose and the minimum level which it should seek. Excessive levels of taxation should be avoided, although this must be weighed against several factors:

(a) Tax-to-GNP (gross national product) ratios in some developing countries are well below those in other countries of the same region facing more or less similar conditions;

(b) Such countries have limited resources with which to facilitate tax administration;

(c) Infrastructure pricing policies are often an effective way of generating additional general tax revenues.

The main questions for consideration are thus:

(a) The extent to which the transport infrastructure should contribute to general tax revenues;

(b) How to generate extra revenues in ways that promote economic efficiency;

(c) How to commercialize selected public transport infrastructures to make them more attractive to private-sector investors.

B. Taxation criteria

The different taxation and charging options available in developing countries are reviewed below to assess the extent to which they can contribute to efficient resource use in the roads subsector. It is assumed that no developing country can afford a pure, marginal-cost pricing system and that road-user taxes will be expected to generate a surplus for general tax revenues. To be effective, taxes should be practical and feasible, given the social and administrative circumstances of the country concerned. Seven criteria have been suggested for such taxes:

(a) Administrative inefficiency should be avoided as much as possible, with collection costs accounting for no more than a small percentage of revenues;

(b) Effects on income distribution should be politically acceptable;

(c) Legal attempts to avoid a tax should not result in uneconomical consequences, as in a high gasoline tax, encouraging a shift to diesel-powered vehicles;

(d) The tax base should be sufficiently broad to permit a small tax to generate a large amount of revenue;

(e) Taxes should be equitable in that the beneficiaries of the services provided are the principal taxpayers;

(f) Taxes should not have a marked inflationary effect;

(g) Tax yields should rise automatically with inflation.

Road-user taxes are considered with these general requirements in mind, but also for their sustainability in an appropriate cost-pricing system.

C. Types of road-user charges

1. Fuel tax

Taxes on gasoline and diesel fuel, an important form of road-user charge in most countries, meet the aforesaid criteria well. They are relatively easy to collect and can be charged at a port of entry, local refinery, or even as a sales tax. There is some risk that dependence on fuel taxes for general tax revenues may cause intersectoral or intermodal distortions. In some countries, such as Somalia and Uganda, fuel taxes have accounted for more than three quarters of total road-user revenues. Another disadvantage of fuel taxes is that they can result in the uneconomical substitution of one type of fuel for another and, unless complex exemption arrangements are introduced, have an impact on consumption that would reach beyond the roads subsector.

Fuel taxes are appropriate to a marginal-price charging system in that they vary with distance and influence the actual cost of making a journey. Fuel taxes, however, are not wholly ideal for this purpose. They increase with vehicle use and declining road quality but less than proportionately to corresponding road damage; fuel consumption per ton-km decreases inversely with vehicle weight while road damage increases. There is, consequently, a tendency to either over-collect from lighter vehicles and on higher-quality roads or under-collect from heavier vehicles that cause the most damage and on the lower-quality roads where wear and tear is relatively high. Therefore, if a close approximation to a marginal-cost pricing structure is to be achieved, it is necessary to supplement fuel taxes with other forms of road-use charges.

In some, countries, fuel, far from being taxed, is actually subsidized with the aim of encouraging development through low transport costs or simply as a result of political pressure. However, any potential benefits are likely to be offset by the increase in maintenance and operating costs resulting from the inefficient usage of the road system. Fuel subsidizing in the roads subsector should be avoided.

2. Taxes on vehicles, spare parts and tyres

Other taxes that vary with usage are import, excise and purchase taxes on spare parts, tyres, and, to a lesser extent, vehicles. These have some advantage over fuel taxes in countries with a high proportion of gravel and dirt roads, because vehicles and tyres sustain considerable wear on lower-quality roads; thus, the taxes imposed on their purchase reflect road usage. Taxes on vehicle parts and tyres match the above-mentioned criteria fairly well and, used in conjunction with fuel taxes, can be fashioned in such a way as to bring road-user charges more closely in line with actual marginal costs, perhaps by being imposed on the heavier vehicles that under-contribute in a system based exclusively on fuel tax.

3. Distance taxes

Other usage-related taxes applicable to commercial vehicles are those levied directly on passenger fares and freight charges, reflecting both vehicle weight and distance travelled. Such taxes do not correspond especially well with the general criteria, however, as they are costly to collect and open to evasion, particularly in countries with weak administrative systems. Sophisticated taxes of this type have been used in some developed countries but are not common in developing countries.

4. Tolls

Tolls are an extremely flexible form of usage-related charge in that they can be differentiated finely according to vehicle type, journey length and time. Consequently, they are, in theory, particularly suitable for marginal-cost pricing. In practice, tolls are only practicable under conditions of fairly heavy traffic flows yielding sufficient revenues to cover the costs of providing and maintaining collection and access facilities. Under light traffic conditions, collection costs absorb a high proportion of revenues, or tolls must be raised so far above marginal costs as to deter transport operators from making economically desirable journeys. Tolls are therefore not common in developing countries, except on some heavily trafficked roads (as in Mexico, the Republic of Korea and the Philippines) and on some isolated feeder roads, as in Zaire, where local circumstances render evasion or misappropriation difficult.

5. Non-variable charges

Vehicle registration fees and licences are non-variable because, once paid, they no longer affect an operator's decision whether or not to undertake a journey. As they do not vary with road usage, they are not an effective form of charge for a marginal-cost pricing system. Nor are they particularly practicable from an administrative viewpoint, as they require extensive and efficient record-keeping and must be collected from a large number of vehicle owners, offering scope for evasion and corruption. Yet, they are widely used in developing countries. They may be levied according to vehicle characteristics such as engine displacement, import price, vehicle weight and axle weight, the latter offering the closest link with road damage. This is a useful charge for contributing to invariable road costs or general government revenues since it can be raised to whatever level the market will bear without significantly affecting subsequent road usage decisions.

6. Non-user taxes

An alternative source of road financing is a tax on indirect beneficiaries of road services or even general tax revenues. In fact, developing countries with comparatively small vehicle fleets would be obliged to resort to such sources of revenue in order to fully recover road costs. Although there is no theoretical pricing principle involved, it may be considered desirable, in the light of social equity criteria, to impose such taxes on indirect beneficiaries rather than general taxpayers. Two examples are: a local sales tax on agricultural produce largely induced by road improvement; and a tax on local market stall-holders who benefit from improved marketing prospects. Such taxes, not being directly linked to road usage, are not particularly appropriate in themselves for marginal-cost pricing, but they can be used to complement a multi-part road-user charging system to correct for over-dependence on usage-related taxes. This particular type of tax is examined in more detail in the following section.

7. Capturing increased property values

This financing mechanism relies on capturing some of the consumer surplus associated with the provision and operation of the transport infrastructure from landowners whose property has appreciated as a direct result of providing that infrastructure. The traditional method of doing this is through "betterment" taxes. However, the main difficulty of these taxes lies in their administration. In order for these taxes to operate effectively, land needs to be registered, owners need to be clearly identifiable and there needs to be a reasonable assessment of property values and the way in which they are affected by provision of new infrastructure. In many countries, these difficulties are compounded by political problems since landowners are often also influential politicians.

An alternative to betterment taxes is the development of joint ventures between owners/developers and infrastructure providers as a means of utilizing some of the benefits associated with enhanced property values to finance provision of the infrastructure. A variety of arrangements is possible, including those where:

(a) Property owners pay part of the cost of providing the public infrastructure;

(b) Government and private-sector property owners may enter into a joint venture under which the Government provides the infrastructure while the property owners finance part or all of its cost;

(c) Government enters into a joint venture with a private-sector partner, not generally the owner of affected property, under an agreement in which the Government contributes the property for development and the private-sector partner develops the property and provides the infrastructure.

D. Formulating an economically efficient road-user charging system

In formulating a road-user charging system based on marginal-cost principles, account must first be taken of other policy goals of the existing

road tax system. If, for example, the Government decides that road-user charges should cover total road subsector expenditures and contribute to general tax revenues without undue distortion of demand, then these objectives should be regarded as constraints determining the extent to which marginal-cost pricing or other market-correcting principles can be incorporated within the tax structure. Political and administrative factors should also be considered. If, for example, record data is insufficient or adequate supervision is impracticable, then it would be unwise to introduce a distance tax on passengers and freight, however attractive theoretically. Similarly, it may not be politically feasible to effect, at least in a single phase, the tax increase desirable for a marginal-cost pricing system. Finally, transport-coordinating requirements should be kept in mind; it would not, for instance, be economical to reduce a user charge in order to secure more efficient use of a low-marginal-cost road if it would have the effect of diverting traffic from a railway offering transport at an even lower cost. In short, a second-best solution, featuring at least some of the benefits of marginal-cost pricing, may have to be accepted in view of other policy goals as well as political and administrative constraints.

Subject to these constraints, the general approach that might be taken by a developing country wishing to restructure its road-user charging system to obtain some of the benefits of marginal-cost pricing would be as follows: First, for reasons of internal financial discipline and the limited choice of taxation sources, a contribution from road users to fixed road costs and general taxation would probably remain necessary. However, this should be employed only to the extent that the pattern of traffic usage is not distorted too far from that which would have resulted under a pure, short-run, marginal-cost pricing policy. This may occur if multi-axled commercial vehicles were so heavily taxed as to deter transporters from substituting them for road-damaging, two-axle, rigid trucks.

Many countries adopt a fuel tax, both for its practical advantages and its correlation with road damage, as the foundation of their user-charging structure. The wide base of this tax also makes it a useful source of general tax-revenues. However, in view of the tendency of a fuel tax to either over-collect on lighter vehicles or under-collect on heavier vehicles, it should be set in such a way as to reduce over-recovery. It could then be supplemented by a charge on vehicles, tyres or spare parts, imposed only or principally on heavier vehicles to bring their total charges more closely into line with their high marginal costs. But as under-recovery would still tend to emerge with increasing vehicle weight at the upper end of the range, vehicle registration fees bearing relatively heavily on these larger vehicles could be used as a further complementary pricing measure. Although not distance-related, the incidence and level of registration fees can be finely ordered so as to readdress, in average terms, the discrepancy between the charges and marginal costs of the heaviest vehicle classes.

E. Private-sector financing

1. General

The aim here is to identify the conditions under which the private sector might be willing to finance the public transport infrastructure because it is

viewed as a profitable investment rather than a government-run public utility. Most of the schemes involving private-sector financing of the public transport infrastructure are being provided by the private sector on the basis of a franchise granted by the Government, on a negotiated or competitive basis, to design, construct, finance and operate the public transport infrastructure for a specific number of years. Such schemes are being implemented in many parts of the world. Revenues for the projects come from user charges. The private-sector involvement can be more readily negotiated in countries in which there are willing investors and where financial markets are reasonably well developed.

2. Arguments for and against private financing

Private financing of infrastructure has been a cause of debate for many years. The most common arguments against the use of private financing are:

(a) Investments in transport infrastructure are high-cost and risky and usually would involve a long period for both planning and construction;

(b) Financing charges for private projects are likely to be higher;

(c) A private developer will have different objectives than a Government; a private developer will seek to maximize the return on his investment while a Government will seek to maximize the welfare of the people;

(d) Unless constrained, a private developer may be in a position to monopolize his investment in order to extract more profit;

(e) Government is likely to have to offer substantial guarantees to facilitate the award of the contract.

On the other hand, the common reasons put forward for using the private sector to provide transport infrastructure are the following:

(a) It is an additional source of financing;

(b) Project risks can be passed to a private-sector entity;

(c) The management and technical skills of the private sector can be utilized for the identification, planning, design, construction and operation of project facilities;

(d) The involvement of private financing often means that the engineering design is tailored to better suit the demands of the market.

3. Requirements of the private sector

In most cases, for private enterprises to participate effectively in providing the required facility, different forms of guarantee would be required to cover the following risks:

(a) Fluctuations in exchange rates, as foreign-currency components could amount to a substantial percentage of the total cost of the project;

- (b) Interest-rate fluctuations;
- (c) Lower-than-predicted traffic volumes;

(d) High construction costs, especially if scheduled construction time is exceeded for unforeseen reasons that might be beyond the control of the private investor.

4. Suitability of projects for private financing

In the case of private financing of infrastructure, user charges are only appropriate where there is a high level of usage. It follows that the kind of project which is suitable for private financing is one for which there is a great and easily identifiable user demand at any rate. Therefore, it is likely to be a project which already has priority from a governmental point of view and which should have little difficulty competing for government funds.

On the other hand, road users will not easily accept having to pay for something which was previously free of charge. It follows that only projects which are either new or, if a replacement for any existing infrastructure, obviously a great improvement, are suitable for private financing. In the case of the latter, it helps if there are alternatives for users. For example, public acceptability of the new toll system on the Cairo-Alexandria desert road was achieved in view of two elements: Firstly, the level of service of the desert road was improved considerably, and secondly, drivers could opt for the Cairo-Alexandria agricultural road, which was free of charge.

As a result, only a small proportion of all transport projects will be suitable for private financing, and they will be characterized by:

- (a) High level of user demand;
- (b) Either new or vastly improved service;
- (c) Providing alternative to existing systems.

F. Pricing policies in the transport sector

Different countries adopt different policies in connection with the pricing of transport services, depending upon the role of the transport sector in the socio-economic development of each country. However, pricing policy in principal would aim at:

- (a) Coordination among different transport modes;
- (b) Optimum utilization of available resources;
- (c) Possible repayment of some of the government expenditure on the transport infrastructure.

Ideally, transport prices should reflect all real economic costs incurred for the services provided. However, this is not usually the case in all circumstances. In some cases, transport users are heavily taxed through indirect or direct systems of taxation. In other cases, there could be heavy

subsidies from concerned authorities either directly to transport operators to cover their financial deficit, or indirectly through reduction of fuel prices below economic cost. Such policies would lead to distortion in the prices charged to users, resulting in under- or overutilization of services.

Another important feature of the pricing policy of transport services is that the services provided by the transport sector are considered as serving other social and economic objectives. This would include maintaining the cost of living at certain levels and/or urban regional development.

It is therefore very important to have a clear and well-defined pricing policy, usually called a transparent transport pricing policy, in order to achieve optimal utilization of available resources. Among the items related to pricing policy are road-user charges. The following section will cover this particular item in more detail.

G. Road-user charges

The main concept of theories related to user charges is that transport users should bear fully the real cost of providing such services. This implies that transport users should bear the variable cost pertaining to that road network (in some cases this is termed the marginal cost), which covers only the maintenance cost.

This approach is based on the following considerations:

(a) Each trip will cause some damage to the road, and the user should bear the cost of that damage;

(b) Any exaggeration in passing the cost of infrastructure on to the user could lead to cancellation of some trips. This could reflect negatively on the development of other sectors.

Authorities responsible for a road network usually express concern about the validity of such approach. They view such matters in terms of their responsibilities towards maintaining and expanding such networks to cope with future anticipated demand. In that respect, they view a pricing policy that covers only marginal cost as inadequate for meeting their financial obligations, especially in the present economic situation where resources for investment have become considerably limited.

H. Revenues and expenditures on road transport

1. Expenditures (after construction)

The marginal cost of the road network, urban and interurban, would include, from the viewpoint of road authorities, the following items:

(a) Depreciation cost. This is based on annual increments according to the lifetime of the infrastructure, which is usually about 20 years in the case of road construction;

(b) Fixed maintenance cost. This will be incurred by the concerned authority, regardless of the utilization of the road network, in order to

maintain the road network to appropriate standards in order to face adverse climatic conditions and ageing;

(c) Variable maintenance cost. This cost is related to the utilization of the road network. Each type of vehicle in the traffic stream would have some damaging effect on the structural capacity of that particular section;

(d) Operating cost. This is usually related to traffic signalling mainly in urban areas;

(e) Administrative cost. This would cover the administrative costs of the concerned authorities within either road authorities or other authorities responsible for enforcement of rules and regulations, e.g. traffic police.

2. Revenues

In contrast to expenditures, revenues from transport users are not usually collected by the concerned road authorities. Transport users usually bear different types of taxes collected by different governmental agencies. Such taxes comprise the following items:

- (a) Custom duties on imports (vehicles, spare parts, tyres, etc);
- (b) Various types of taxes on fuel and/or other items related to operation;
- (c) Vehicle licence fees;
- (d) Transport operator licence fees;
- (e) Road tolls (user charges).

II. APPLICATION

(Reference to a case-study on toll toads in Egypt)

A. Factors related to road-user charges

In order to reach realistic estimates of road-user charges, a complete analysis of all items related to revenues and expenditures should be performed. The present study is concerned with only one item concerning toll roads which is applicable only to intercity road transport. There are many reasons why concerned authorities usually refrain from applying direct charges on road users except in very limited cases like the construction of new tunnels or bridges in specific cities. On the other hand, the concept of toll roads has been widely advocated in many countries all over the world. The study hence concentrates on defining a simplified approach to determine what cost the user should bear in accordance with the amount of damage caused to the road. It is assumed here that only fixed and variable maintenance costs would be recovered.

In order for such a study to be effective, relevant field data must be collected in order to have full details about traffic flow characteristics on the intercity road network in terms of:

- Average daily traffic (ADT)
- Traffic composition (percentage of each type of vehicle)
- Load factor
- Axle load configuration
- Passenger car equivalent unit (PCU).

1. Average daily traffic (ADT)

As an example, the following data is relevant to some parts of the Egyptian national road network and is derived from several studies performed by the Egyptian Ministry of Transport. In order to simplify calculations a linear relationship is assumed between variable maintenance cost and average daily traffic (measured as 100 ADT).

Traffic counts are usually performed during a 24-hour period. In order to calculate the ADT, the traffic count for the 24 hours has to be factorized, taking into consideration daily, weekly and seasonal changes in traffic volumes.

The ADT on some specific links was between 5,000 and 10,000 PCU.

2. Traffic composition

Traffic composition varies on different links in the road network. In urban areas, small passenger vehicles will dominate traffic volumes. On the other hand, on the intercity road network both cars and buses will have a bigger share.

For example, the following pattern was found on a major road link in Egypt:

<u>Type of vehicle</u>	<u>Percentage of traffic volume</u>
Saloon and pick-up	60
Buses	5
Light lorry	25
Medium lorry	6
Heavy lorry	<u>4</u>
Total	100

In order to reach realistic estimates of the traffic composition, different types of traffic counts must be performed on different links in the road network.

3. Load factor

Deterioration of asphalt pavements is directly related to axle load. Analysis of multi-layer pavement systems is usually based upon a certain number of standard axles (SA=8 tons) during the lifetime of a particular link. Consequently, axle loads that vary from the SA can be converted to SA using the following equation:

$$SA = \frac{W^4}{8}$$

where:

W is actual axle load (tons).

Applying this equation to several types of vehicles that prevail in the traffic composition on the Egyptian road network, the following results were obtained:

<u>Type of vehicle</u>	<u>Weight (tons)</u>	<u>Equivalent SA</u> <u>(for maximum loaded axle)</u>
Bus	14.5	1.6
Light lorry	Empty: 5.0	0
	Loaded: 13.0	1.35
Medium lorry	Empty: 9.0	0
	Loaded: 29.0	3.3
Heavy lorry	Empty: 12.5	0.1
	Loaded: 42.5	15.5

Small cars, saloons and pick-ups would cause no structural damage to pavement and are consequently equivalent to zero SA.

4. Passenger car equivalent (PCU)

The traffic flow on any particular sector of the road network usually comprises different types of vehicles at varying speeds. These different types of vehicles must be standardized into a specific type: the standard

saloon car, which is referred to as PCU. All related aspects of traffic engineering, such as road capacity and traffic volumes, are usually expressed put in terms of PCU to facilitate comparison. This means that large vehicles elicit high PCU numbers and vice versa. However, vehicle dimensions represent only one aspect of PCU estimation; other aspects usually include:

- Traffic composition
- Driver behaviour
- Enforcement of legal axle loads
- Standards of geometric design
- Surface road conditions
- Shoulder conditions

Thus, there are no fixed PCU values applicable to all conditions. Different countries would apply different PCU values according to prevailing road conditions. Previous studies have revealed the following values pertaining to conditions on the Egyptian national road network:

<u>Type of vehicle</u>	<u>Equivalent (PCU)</u>
Light vehicle	1
Bus	4.7
Single lorry	3.1
Trailer-lorry combination	6.3

B. Example of theoretical distribution of maintenance costs over road users

1. Basic data

In order to make an assessment of the cost to be incurred by different types of vehicles using the road, some basic information is required:

Road length	200.0 km
Maintenance cost	
Fixed	\$US 4.0 million/year
Variable	\$US 2.0 million/year
Average daily traffic (ADT)	2,000 vehicles

(Assuming same data for traffic composition and PCU as previously stated.)

Unit maintenance cost

Fixed/km	\$US 20,000/year
Variable/100 ADT/km	\$US 500/year

2. Maintenance fixed cost

This cost will be distributed over all vehicles using the road, irrespective of their axle-load configuration. The distribution of fixed cost is based upon the number of equivalent passenger units (PCU) each vehicle on

the road actually represents. Therefore, if a saloon car represents a single unit, a bus will be 4.7 units and a single lorry will be 3.1.

3. Maintenance variable cost

This cost will be distributed over vehicles according to the theoretical damage that each particular vehicle inflicts on the road. This, of course, will be associated with their standard maximum permissible axle load and equivalent standard axle (SA). Based on such an assumption, small cars would cause no damage to pavement and consequently would bear no share in maintenance variable cost. The details of these assumptions and the share of each type of vehicle given in the example are illustrated in table 1.

Table 1. Distribution of maintenance costs

Type of vehicle	Percentage in traffic stream	Fixed		Variable	
		PCU	Equivalent no.	SA	Equivalent no. of SA
Saloon/pick-up	60	1	60	0	0
Bus	5	4.7	23.5	1.6	8
Light lorry	25	3.1	77.5	0.6	15
Medium lorry	6	6.3	37.8	1.6	9.6
Heavy lorry	4	6.3	25.2	7.8	31.2
Total	100		224.0		63.8

It is therefore possible to estimate both fixed and variable maintenance costs for each type of vehicle as follows:

a) Fixed maintenance cost/km/PCU

$$= \frac{20,000}{\frac{224 \times 2,000 \times 365}{100}}$$

= 0.0122 US dollar

b) Variable maintenance cost/SA

$$= \frac{500}{63.8 \times 465}$$

= 0.0215 US dollar

In table 2, the fixed and variable cost per kilometre are calculated for different types of vehicles.

Table 2. Fixed and variable maintenance costs according to type of vehicle/km
(US dollars)

Type of vehicle	Maintenance cost/km travelled		
	Fixed	Variable	Total
Saloon/pick up	0.012	0.0	0.012
Bus	0.057	0.034	0.091
Light lorry	0.038	0.013	0.051
Medium lorry	0.077	0.034	0.111
Heavy lorry	0.077	0.167	0.244

Thus, for a 200-km trip (the same as between Cairo and Alexandria via the desert road outside urban areas) the fees listed in table 3 should be charged in order to recover maintenance costs. For comparison, table 3 also indicates such fees for different traffic volumes.

Table 3. Maintenance costs according to type of vehicle and traffic volume
(US dollars/200km)

Vehicle type	Traffic volume		
	2,000	10,000	15,000
Saloon/pick up	2.4	0.12	0.08
Bus	18.2	3.64	2.43
Light lorry	10.2	2.04	1.36
Medium lorry	22.2	4.44	2.96
Heavy lorry	48.8	9.76	6.51

The figures illustrated in table 3 clearly indicate the effect of traffic volume on the cost incurred by each individual vehicle owner. At a traffic volume level of 2,000 ADT, which is considered very light, the cost per vehicle will be extremely high. On the other hand, at 10,000 ADT the cost to each vehicle is reduced to a reasonably negotiable level.

C. Comparison with existing toll systems in different countries

Toll road systems were initiated early in the 1960s in both Italy and France during the period of concentration on infrastructure development after the Second World War. In both countries it was realized that the availability of investment did not match the requirement for building such a vast road network, especially with the high construction standard required for modern

motorways. It was also politically unacceptable to increase government revenues through a system of heavy taxation. A new system did appear in the form of "concession companies" to assume the responsibility of design, construction, maintenance and administration of specific parts of the road network as well as all financial liability, based on a contractual agreement with the concerned authorities outlining conditions of repayment of the tolls collected from road users. The system, which was originally implemented in some European countries and proved to be successful in many circumstances, has spread to many other parts of Europe and to Asia.

In the ESCWA region, the system of toll roads has not yet been implemented in any member countries, with the exception of Egypt, which applied this system to certain parts of the Egyptian road network beginning in 1984.

Table 4 illustrates the fees charged to different types of vehicles in several countries.

Table 4. Fees charged on toll roads (1989)
(US dollars per 100 km)

Country	Type of vehicle		
	Private car	Buses 3-axle lorry	Lorry with more than 3 axles
France	5.6	11.7	11.7
Italy	5.6	6.9	11.2
Spain	8.2	14.9	17.3
Portugal	4.0	8.8	9.9
Greece	0.64	1.0	1.3
Hungary	1.0	4.2	4.0
Malaysia	2.0 _a /	-	-
Egypt	0.18	0.54	0.90

Sources: Ian G. Heggie, "Financing public transport infrastructure: an agenda for reform", 17th Conference of the Planning and Transport Research and Computation International Association, 1989; Richard Scurfield, "The private provision of transport infrastructure", 18th Conference of the Planning and Transport Research and Computation International Association, 1990; Egypt, Ministry of Transportation, Transport Planning Authority, Egypt: National Transport Study.

a/ Project under way.

From the figures shown in table 4, it can be noticed that there is a wide range of toll fees. For most European countries, apart from Greece, toll fees are to some extent comparable. Toll fees in Greece are about one tenth of those prevailing in the four Western European countries. On the average, toll fees for different types of vehicles in France, Italy, Spain and Portugal are as follows:

(US dollars per 100 km)
Private car: 5.85
Bus and 6-axle lorry: 10.60
Heavy lorry: 12.50

A comparison of these figures reveals the following:

(a) In spite of the fact that cost of construction (and maintenance) of any specific length of motorway is the same in most European countries, there is a wide difference in toll fees among these countries;

(b) It does appear that the toll fees are related to, among other things, per capita GDP;

(c) The toll fees charged to different types of vehicles are not proportional to the damage inflicted by the axle-load configuration of each vehicle. It is clear that there is cross-subsidy between different types of vehicles. The private saloon car is overcharged, whereas heavy lorries are undercharged;

(d) When considering the average toll fees applied in the four Western European countries to Egyptian conditions for a road 200 km long, the total annual revenue will amount to approximately \$US 58 million (assuming ADT = 10,000). This implies that such a level of toll fees would recover all investment incurred in the construction, maintenance and operation of that particular length of the road network;

(e) In a 1988 study by Darul Handasa, a Lebanese engineering house, about different transport modes in the Gulf Cooperation Council (GCC) countries, the vehicle operating cost (OC) was estimated to be \$US 0.07 per ton per kilometre. Thus, it would cost \$US 182 to transport a full load of 26 tons a distance of 100 km. For a load factor of 0.5 (return journey empty), the European level of toll fees would mean an increase of 13.3 per cent in the transport cost.

(f) To apply European toll fees in Egypt would mean increasing the prevailing level of toll fees in Egypt 30-fold for private cars, 20-fold for buses and 3-axle lorries and about 15-fold for heavy lorries.

D. The toll-road system in Egypt

Toll roads in Egypt are established according to Law number 146 of 1984, after the dualling of the Cairo/Alexandria desert road and before its opening to traffic. The main objective of the law is to improve service and to insure the highest safety levels for road users through improvements financed by the toll fees collected according to said law. Law 146 added a new article to Law number 84 of 1968 for public roads. This new article specifies that it is possible to collect fees for the use of express roads, although it must be specified by a decree from the cabinet, and alternative routes must be available. This new article is not applied to military or police vehicles or to ambulances. Use of funds from toll fees is specified in the law as given in the next paragraph.

The funds collected from tolls must be kept in a separate account in the name of the Road and Bridges Authority (RBA). Expenditure from this account is earmarked for raising the level of service and the maintenance and operation of the toll roads only. Any expenditure must be authorized by a decree from the Minister of Transport in accordance with the recommendations of the RBA Board of Directors. The law also specifies that administrative expenditures must not exceed 10 per cent of the amount collected annually from tolls.

The toll fees according to vehicle type in August 1992 are shown in table 5. The toll fees have not been changed since Law number 146 was passed in 1984.

Table 5. System of toll charges in Egypt

Vehicle type	Toll/ride ^{a/}	\$US equivalent
Private car or taxi	LE 1 ^{b/}	0.3
Pick-up or light truck	LE 2	0.6
Bus	LE 2	0.6
Single truck	LE 3	1.0
Heavy truck	LE 5	1.5

Source: Egypt, Ministry of Transportation, Transport Planning Authority, "Egypt: national transport study".

^{a/} For the full length of the road link.

^{b/} \$US 1.00 = 3.32 Egyptian pounds (LE) (August 1992).

Table 6 lists the roads that have become subject to tolls since Law 146 came into effect in 1984, once they were upgraded and their level of service raised.

Table 6. Development of toll roads and revenues in Egypt

Name of road	Date opened to traffic	Average Monthly revenue (LE)		Length (ckm) ^{b/}
		1990/1992	1991/1992 ^{a/}	
Cairo/Alex desert	8.11.84	835,174	856,285	228
Haikstep/Belbis des.	1. 7.86	165,048	169,523	35
Cairo/Ismailia/Port-Said desert road	15.8.89	445,065	452,105	205
Maadi/Kattamia/Ein-El-Soukhna desert	15.8.89	178,881	196,267	63
El-Fayoum desert	1.7.92	N.A.	N.A.	98

Source: Egypt, Ministry of Transportation, Transport Planning Authority, "Egypt: national transport study".

^{a/} The average monthly revenue in fiscal year 1991/1992 has been calculated over the period July 1991 through April 1992, inclusive.

^{b/} Toll fees are charged only on certain parts of each link depending upon the location of the entry and exit gates.

The following list is an example of the type of works financed from toll revenues during the years 1990, 1991 and 1992 for the Cairo/Alexandria desert road:

(a) Patching and strengthening works:

- (i) From km 70 to km 105 from Cairo at a total cost of LE 3,244,234;
- (ii) From km 105 to km 70 from Cairo at a total cost of LE 3,903,000;
- (iii) From km 40 to km 70 from Cairo at a total cost of LE 3,108,000;
- (iv) From km 70 to km 40 from Cairo at a total cost of LE 3,133,000;
- (v) From km 123 to km 56 from Alexandria at a total cost of LE 8,755,100;

(b) Level of service improvement works:

- (i) Delivery and fixation of ground reflectors (cat's eyes) at a total cost of LE 1,036,625;
- (ii) Construction of level crossings from km 123 to km 8 from Alexandria at a cost of LE 6,027,700.
- (iii) Construction of rest houses and toll booths along the road;
- (iv) Construction of 21 steel overhead trusses for traffic signs;
- (v) Tree plantation along the median strip and on both sides of the road;
- (vi) Automation of the toll station at Pyramid and Eimeria;
- (vii) Provision of warning and information traffic signs.

Egyptian law presently prohibits financing road investment costs through toll charges. Also, all toll roads in Egypt so far are desert roads with the exception of a few agricultural roads. The general policy in Egypt is to introduce a toll only after a noticeable improvement has been made. An example of this policy is the improvement of the El-Fayoum desert road, which has been recently rolled. The cost of dualling and improving the road amounted to LE 43 million for a total length of 93 km and was financed by the Investment Bank as a public expenditure. After all the improvements were completed, the road was declared a toll road.

The following observations have been made regarding the toll road system in Egypt:

- (a) The toll fees are fixed irrespective of the length of the trip;
- (b) The toll fees have been kept at a constant level since 1984. In comparison, the exchange rate of the US dollar against the Egyptian pound has since moved from 1.65 to 3.32 resulting in a reduction of approximately 50 per cent in real terms;
- (c) The toll-charging structure does not reflect the damage inflicted on pavement by different types of vehicles;

(d) The annual increase in revenue from toll roads is about 4 per cent;

(e) Total annual revenue from four roads for the fiscal year 1991/1992 was LE 16,475,000, which amounts to nearly \$4.96 million. The length of the four links covered by the system is 531 km. This is equal to an annual revenue of about \$US 9,340 per kilometre, which can only cover a minor portion of the maintenance cost;

(f) The average vehicle operating cost as of August 1992 ranged between LE 0.15 and 0.20 per ton per kilometre. For heavy lorries on a trip with an average length of 150 km, the toll fees will be about 2 per cent of the total operating cost, assuming a load factor of 0.5.

III. CONCLUSION

The present document deals with an important issue for all concerned road transport authorities in the ESCWA region in connection with exploring ways and means of generating additional revenues to face continuous government cuts on road expenditure. It consists of two parts, the first of which deals with the theoretical approach of road-user charges while the second part comprises the procedure for application based on a case-study of toll roads in Egypt.

Seven types of road-user charges were reviewed. These include full tax, taxes on vehicles and parts, distance taxes, tolls, non-variable charges, non-user taxes and capturing increased property values. In formulating a road-user charging system based on marginal-cost principles, account must be taken of other policy goals of the existing road-tax system. A contribution from road users to fixed road costs and general taxation would remain necessary.

Many countries adopt a fuel tax as the foundation of their user-charging structure, both for its practical advantages and its correlation with road damage. The wide base of this tax also makes it a useful source of general tax revenues. But in view of the tendency of the final tax to either over-collect from lighter vehicles or under-collect from heavier vehicles, it should be supplemented by a tax on vehicles and on parts for heavy vehicles, to bring their total charges more closely in line with their high marginal cost.

Private-sector involvement in financing the public transport infrastructure has been outlined. Arguments for and against private financing of infrastructure have also been examined. In most cases private enterprises would demand several guarantees against fluctuation in exchange rates and interest rates, lower traffic than predicted and higher construction costs.

Different countries adopt different policies in connection with pricing transport infrastructure depending upon the role of the transport sector in the socio-economic development of each country. The main concept of theories related to user charges is that transport users should bear fully the real cost of providing such services. This implies that transport users bear only the variable cost pertaining to that road network, which only covers the maintenance cost.

The study concentrates on defining a simplified approach to determine what the user should bear in accordance with the damage caused to road. It is assumed that only fixed and variable maintenance costs would be recovered. The factors affecting the level of such charges are average daily traffic (ADT), traffic composition, load factor, maximum axle load and passenger car equivalent unit (PCU).

An example was given by the traffic conditions prevailing in the Egyptian national road network, and it was found that fixed and variable maintenance costs according to type of vehicle would amount to \$US 1.2 and \$US 24.4 per 100 km travelled for saloon cars and heavy lorries, respectively. This is compared with \$US 5.6 and \$US 11.7 per 100 km travelled for the same two types of vehicles in France.

The toll roads in Egypt were established in 1984. By law it is possible to charge toll fees only on express roads after their level of service is raised and after they are upgraded, providing that alternate routes are available. The fees are fixed regardless of the distance travelled, but vary according to type of vehicle. The toll fees, which have been at a constant level since 1984, amount to \$US 0.3 per trip for private cars and \$US 1.5 per trip for heavy lorries. These fees are far below previously calculated estimates for covering fixed and variable maintenance costs. Total revenues from toll roads amount to about \$US 6.0 million per year. Although this represents only about one tenth of maintenance cost requirements, it represents, a fundamental approach in recovering at least part of the road expenditure and could be substantially increased in the future.

The approach illustrated in the present document could be useful for other road transport agencies in illustrating at least the range of toll fees on different types of vehicles in case road-user charge policies are adopted in the future.

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Annex II

**PRIVATIZATION AND DEREGULATION IN
THE AIR TRANSPORT SUBSECTOR**

This paper was prepared during the period August-October 1992 by Dr. Majdi Sabri, Vice-President of Planning, Royal Jordanian Airlines, Amman, Jordan, who served as a consultant to the Transport and Communications Division, ESCWA. The views expressed herein are those of the author and do not necessarily reflect those of the United Nations.

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INTRODUCTION

The international air transport industry has until recently been dominated by strict regulations and substantial State ownership. This is primarily due to the fact that this industry has always been considered a quasi-public utility that requires close monitoring and stern controls to ensure system reliability and stability. Many people have argued that the absence of regulations and government intervention will lead the airline industry to develop the characteristics of an unstable oligopoly, in which case it would fail to produce the reliable system envisaged by public policy.

Air transport today is a much different industry than it was in 1944 when its regulatory framework was drawn up at the Chicago Convention. Signs of radical changes started to surface in the late 1970s when the United States Government introduced new policy measures aimed at deregulating international air services. Since then, many Governments all over the world have made important steps in the same direction, resulting in radical changes not only in the regulatory framework of the industry but also in its structure. Today, the tide of air transport policy is flowing strongly in the direction of government withdrawal from economic regulation and industry ownership.

The winds of change have brought about new concepts and established new facts in the air transport world. Among these are: privatization, liberal attitudes towards new entry and traffic rights, reduced nationalism as well as acceptance of foreign ownership, formation of giant multinational airlines, marketing alliances, intensified use of central reservation systems, and a clear trend toward a multinational environment and regional regulatory regimes.

Although this trend started less than 15 years ago in the United States, it rapidly gained momentum in other parts of the world, especially in Europe, the Far East and Latin America. It is believed that it will not be long before it knocks at the doors of the ESCWA region.

The purpose of this report is to discuss the concepts of privatization and deregulation in the airline industry and the most important measures implemented so far. It will also analyse the impact of the new trend on the structure and operation of the air transport sector and assess the influence of privatization and deregulation on the national airlines of the States of the ESCWA region, which are becoming increasingly vulnerable to the new winds of change.

I. AIRLINE OWNERSHIP AND REGULATORY ENVIRONMENT

The international airline industry is a highly regulated industry. Since their early stages of development, commercial airlines have been subjected to a great deal of government intervention in the form of technical and economic regulation as well as State ownership.

Most Governments preferred to regulate the airline industry and dominate the ownership of flag carriers for the following reasons:

(a) Safety considerations which prompted the introduction of a complex of technical standards and regulations aimed at achieving high safety levels. These regulations are based on internationally recommended standards and practices;

(b) Strategic considerations pertaining to the importance of the flag carrier in establishing links with the outside world and in helping to achieve the country's social, economic and political objectives;

(c) The need to maintain the external benefits of the air transport industry, which was considered a public utility or at least a quasi-public utility. It was believed that regulation and government ownership were necessary to avoid any possible conflict between national interests and private commercial needs;

(d) Avoiding the harmful effects of unregulated industry, including low safety standards, wasteful competition, inefficiency and lack of security for investors;

(e) Protecting the interests of the flag carrier from the adverse effects of foreign competition.

Although the above reasons for government intervention gained wide support around the world for a long time, some of them have recently lost their validity, as will be discussed later in this chapter.

A. Airline ownership

1. Ownership of major airlines

Substantial State ownership has long been the norm in the airline industry with the single exception of the United States of America. Other countries were keen on wholly or substantially owning their national carriers to ensure that public policy objectives are properly achieved. During the past few years, there has been a growing trend towards privatization, particularly in Europe, the Far East and Latin America, which resulted in the sale of airline shares of varying magnitude to the private sector.

Table 1 shows the ownership status of 93 major airlines registered in Europe, Latin America, Asia and the Pacific, as well as the Middle East and Africa. The table reflects a clear trend towards private ownership, though the industry is still substantially State-owned.

Table 1. Ownership of major world airlines (by region)

Region	Number of airlines by status				Total
	Wholly public	Substantially public	Substantially private	Wholly private	
Europe	14	8	4	3	29
Latin America	7	1	8	2	18
Asia and Pacific	10	3	1	7	21
Middle East and Africa	18	5	-	2	25
Total	49	17	13	14	93

Source: Figures compiled from a list of airlines published in Airline Business, February 1992.

The table indicates that almost 53 per cent of the airlines included in the table are wholly owned by Governments and only 30 per cent are wholly or substantially owned by the private sector. A further analysis of the privatization status is conducted in chapter 4.

2. Ownership of the ESCWA region airlines

Apart from Egyptair, which was established in 1932 as Misr Airwork, most of the other west Asian airlines were formed shortly after the Second World War and in the early 1950s. The remaining airlines were established between 1962 and 1974 either to take over services previously provided by privately owned airlines (Royal Jordanian and Gulf Air) or to establish national air services for the first time (Yemen Airways and Alyemda). The latest scheduled international flag carrier to be established in the region was Emirates Airlines, which took to the air in October 1985.

As shown in table 2, 9 of the 12 scheduled international airlines based in the region are wholly State-owned. The two Lebanese carriers, Middle East Airlines (MEA) and Trans-Mediterranean Airways (TMA), are privately owned while the Government of the Yemen Republic owns 51 per cent of Yemen Airways shares, and the remainder is owned by Saudia, the Saudi Arabian airline. Gulf Air is jointly owned by the States of Bahrain, Oman, Qatar and the United Arab Emirates.

It is important to note that in the past few years some Governments in the ESCWA region have issued licences to privately owned carriers operating specialized services. For example, Egypt has licensed several charter operators and granted at least one of them (ZAS) traffic rights to operate scheduled services to points not served by the national flag carrier, Egyptair. This might be viewed as the sign of a liberal attitude taken by the Egyptian authorities towards entry into scheduled service markets.

Table 2. Establishment and ownership of west Asian airlines

State	Airline name	Year of establishment	Government ownership (Percentage)
Egypt	Egyptair	1932	100
Gulf States	Gulf Air	1950/1974 ^{a/}	100
Iraq	Iraqi Airways	1945	100
Jordan	Royal Jordanian (Alia)	1963	100
Kuwait	Kuwait Airways	1954	100
Lebanon	Middle East Airlines- Air Liban (MEA) ^{b/}	1945	--
	Trans-Mediterranean Airways (TMA)	1953	--
Saudi Arabia	Saudi Arabian Airlines	1945	100
Syrian Arab Republic	Syrian Arab Airlines	1946	100
United Arab Emirates/Dubai	Emirates Airlines	1985	100
Yemen	a) Yemen Airlines	1962	51
	b) Democratic Yemen Airlines (Alyemda)	1971	100

^{a/} Gulf Air was formed in March 1950. Equal shareholders since April 1974 are the States of Bahrain, Oman, Qatar and the United Arab Emirates.

^{b/} MEA shares are owned by Intra Bank Group (68 per cent), Air France (28.5 per cent) and others (3.5 per cent).

B. Regulatory environment

1. Historical background

The Paris Convention signed in 1919 stipulated that States have sovereign rights in the airspace above their territory, which opened the door wide for extensive economic regulation and substantial government ownership of commercial airlines. As a result, a complicated pattern of inter-State bilateral agreements was developed to facilitate the international operations of the then small number of airlines. After a few years, however, the newly established system became increasingly complicated as the number of airlines grew and their route networks expanded.

In 1944, delegates from 52 countries met in Chicago to agree on the exchange of traffic rights, or Freedoms of the Air,^{1/} the control of capacity and frequency of services and the control of passenger fares and freight rates. After a long debate, the Chicago Convention failed to reach a multinational agreement on the exchange of traffic rights, the control of capacity and frequencies or the determination of fares and rates. Alternatively, the exchange of traffic rights became a matter for inter-State bilateral air transport agreements, and the control of capacity and frequencies was left to inter-airline agreements or, in some cases, to inter-State bilateral agreement.

Meanwhile, fares and rates came to be regulated through the traffic conferences of the International Air Transport Association (IATA). The application of fares and rates agreed upon within IATA was made subject to government approval. Consequently, government attitudes towards the exchange of traffic rights, the control of capacity and frequencies and level of fares and rates became a major determining factor in the degree of competition in various markets.

2. Bilateral State agreements

Over the years, States have signed a series of bilateral air service agreements which set the basis for the operation, designate the operating airlines and grant the necessary traffic rights. Such agreements differ in details, but they generally fall under two major types:

(a) The Bermuda type,^{2/} which is fairly liberal, has no restrictions either upon the frequency of service or the capacity provided by the concerned airlines. This type allows for Fifth Freedom operation, provided that total capacity is reasonably related to the end-to-end route potential. The Bermuda type system provides for an ex post facto review of capacity if one carrier feels that its interests are hampered by excessive capacity provided by the airlines of the other party;

^{1/} The Five Freedoms of the Air are negotiated in bilateral air service agreements:

First Freedom: The right to fly over another country without landing.

Second Freedom: The right to make a landing for technical reasons (e.g. for refueling in another country without upsetting revenue traffic).

Third Freedom: The right of an airline from country A to carry revenue traffic from its own country to country B.

Fourth Freedom: The right of an airline from country A to carry revenue traffic from country B to its own country.

Fifth Freedom: The right of an airline from country A to carry revenue traffic between country B and other countries such as C or D. This freedom can only be exercised if countries C and D also agree.

^{2/} Named after the agreement signed in 1946 between the United States and the United Kingdom in Bermuda.

(b) The predetermination type, which usually contains restrictive provisions determining the capacity offered, the frequency of service and possible pooling arrangements between the designated airlines. The determination of capacity and frequency may result in a division of capacity between the designated airlines either equally or according to an agreed upon formula. Strict controls may also be placed on Fifth Freedom operations.

3. Pooling agreements

Pooling is a bilateral affair in which the airlines operating on a designated route agree upon the details of the frequency of services and the capacity offered in order to secure a fair traffic share for each of them and avoid wasteful competition. It is usually employed in accordance with a bilateral agreement that leaves details about the actual capacity offered to the designated airlines to finalize among themselves.

Pooling agreements usually include a formula for sharing the revenues or the costs and revenues of the pooled services. In revenue-sharing agreements, each of the airlines concerned bears the cost of its own operation while all revenues of the pooled services are paid in to a common pool and shared according to an agreed upon formula (usually in proportion to the capacity offered by each partner). In cost/revenue pooling agreements, the service in most cases is provided by one airline, and the partners share the costs and revenues.

4. Change of direction

(a) Change in U.S. aviation policy

In 1978, the United States effected dramatic changes in its aviation policy in line with the Carter administration's commitment to promote consumerism, greater competition and a larger share of international air traffic for U.S. airlines. These changes clearly advocated deregulation of international air service and reduction of existing regulatory controls to the minimum.

The new policy called for the elimination of all restrictions on scheduled services, including those imposed on capacity and frequency provided on each route and the number of gateways served. It advocated the elimination of discrimination and unfair competitive practices faced by U.S. airlines in the international market and the flexibility to designate multiple U.S. airlines in bilateral agreements. The policy also called for the liberalization of charter operation, the flexibility to facilitate the development of competitive air cargo services and the introduction of innovatory fares that departed from the IATA fare-fixing method.

In June 1978, the United States Civil Aeronautics Board (CAB), in what is known as a "show-cause order", asked IATA and its members to show why IATA agreements should not be declared as agreements violating U.S. anti-trust legislation. Shortly after that, the members of IATA agreed in November 1978 to reform their association. The reform was aimed at separating the non-controversial activities of IATA from traffic conferences. Only membership in the trade association was made compulsory, while the airlines

can at will opt out of the traffic conferences within which fares and rates are agreed upon. The reforms also enabled airlines with Third and Fourth Freedom traffic rights to introduce special fares out of their home countries without being considered in breach of the traffic conference agreements for their region.

The reforms, which were aimed mainly at satisfying the CAB requirements, reduced the IATA role in setting fares and rates. Today, only half of IATA trade association members participate in traffic coordination activities. However, IATA is still under the threat of another show-cause order which could be issued by the U.S. Justice Department in early 1993. It is not yet clear to what extent tariff conferences would be affected this time if such an order resulted in the revocation of IATA's authority to set fares.

(b) "Euro-deregulation"

The deregulation trend which started in the U.S. soon crept to other parts of the world, including Europe. Since 1984, a more liberal and free-market attitude has dominated the European regulatory environment. This includes bilateral inter-State agreements as well as multilateral actions initiated by the Court of Justice of the European Communities and the EC Commission.

Bilateral air service agreements recently signed between European Governments clearly reflect a radical change in attitudes toward liberalization. For example, some U.K. agreements went through a two-stage process: an initial agreement which brought partial liberalization followed by a more radical second agreement.^{3/} The new style of agreements included multiple designation of carriers, open route access, and no capacity control (instead of an equal share of capacity). A more liberal attitude was also taken in the area of tariff fixing with the introduction of a "double disapproval" principle whereby fares can be rejected only if both Governments fail to approve them.

Two air transport "packages" were signed by the European Community (EC) transport ministers in 1987 and 1990 comprising more liberal decisions on airfares, capacity and market access. In July 1992, the ministers adopted the third EC air transport liberalization package, which is due to come into force on 1 January 1993. According to this package, national ownership and control criteria for airlines are replaced by EC criteria so as to enable citizens of one EC country to establish airlines in another EC country. Once validly licensed as an EC air carrier, such a carrier can fly any route within the Community with only a few exceptions. The package also granted any Community State the right to withdraw its approval of certain fares if they are found to be excessively high or consistently low (predatory). In such a case the (single) disapproval will stand unless another EC member State has protested, in which case the EC Commission may play the role of arbiter.

^{3/} Rigas Doganis, Flying Off Course: the Economics of International Airlines, second edition, Routledge, London, 1992.

The successive moves towards deregulation in Europe are in line with European integration plans and the creation of a single market where internal frontiers would be abolished. The effect of these moves on airlines outside Europe is not clear so far. The EC air transport relations with non-EC countries within Europe have been developed through special agreements with Norway and Sweden and with the seven members of the European Free Trade Association (EFTA). EC relations with countries outside Europe have not been addressed yet.

(c) Deregulation in other regions

In other regions of the world, Governments have started to move cautiously towards reducing aviation controls. In Japan, the domestic carriers All Nippon Airways and Japan Air Systems were in 1986 allowed to operate international routes, thus breaking the monopoly exercised by Japan Air Lines on international routes. In other Far East countries, new airlines have been licensed to operate domestic and international services.

Australian domestic operations were deregulated in November 1991 and a new entrant, Compass Airlines, introduced services competitive with those of the two domestic airlines, Ansett and Australian. Although the new airline ceased operations after just two months, the outcome of its entry has been evident in substantial fare reductions, a high rate of traffic growth, high load factors and a high percentage of first-time travellers.

In early 1992, the Australian Government approved a new aviation policy aimed at enhancing competition and facilitating tourism. It calls for multiple designation, the creation of a single aviation market with New Zealand, the sanctioning of cross-equity investment among Australian carriers, to continue the privatization process of Qantas Airways and Australian Airlines and to allow major carriers in Australia and New Zealand to operate international and national services.

The Republic of South Africa approved in April 1992 a new liberal international aviation policy that calls for the conclusion of future liberal bilateral air service agreements to be based on reciprocity. Such agreements are planned to provide for free pricing, multiple designation, flexible capacity controls and the opening of new gateways in South Africa.

In addition to unilateral moves towards liberalization, there have been several regional moves in the same direction: Australia and New Zealand agreed to open up their domestic markets to each other's airlines gradually over a three-year period starting in November 1992. They will also try to finalize a treaty by June 1993 establishing a deregulated aviation market across the Tasman Sea.

Meanwhile, the Andean Pact countries (Bolivia, Colombia, Ecuador, Peru and Venezuela) have approved "Decision 320" which establishes that a member State may designate one or more national airlines to operate its international passenger and cargo services on any route within the Andean subregion without discrimination or restriction of access.

The Caribbean countries decided in the CARICOM Summit of Heads of State and Government to give specific focus to the concept of "Community of

Interest" and to examine the bilateral agreements for intra-Caribbean routes with a view to renegotiating them to improve air services in the region. The Summit also requested Caribbean carriers to increase cooperation among themselves to establish strong regional services.

5. Regulatory status in the ESCWA region

The air transport regulatory environment in the ESCWA region is still highly restrictive. Most of the region's Governments favour the predeterminist type of air service bilateral agreement. Low average route density and the need to protect the national airline from competition are believed to be the major reasons behind this tendency.

Detailed information on the bilateral agreements signed by the region's Governments are not available. The only documented information on the restrictive nature of these agreements can be found in a study published by the International Civil Aviation Organization (ICAO) in 1977.^{4/} The study is based on responses to an ICAO questionnaire which was distributed to various civil aviation authorities around the world. Among the respondents were five ESCWA member States (Iraq, Jordan, Lebanon, Saudi Arabia and the Syrian Arab Republic) who gave information on the nature of their bilateral agreements. The respondents favoured the control of capacity by regulating either the number of flights, the actual capacity offered or both. More than 90 per cent of the bilateral agreements signed by the five States contain capacity clauses.

Inter-airline pooling agreements are also popular in the ESCWA region, where most routes are operated as duopolies. As in the case of bilateral inter-State agreements, no information is available on the details of the pool agreements, which are used in this region as a successful means to control capacity and minimize competition.

Successive attempts to reach a common understanding on air transport policy in the Arab world were in vain. The first of these was initiated by the Arab Civil Aviation Council (ACAC) at its twelfth session in Marrakech (Morocco) in 1974 when it unanimously adopted the "Marrakech Declaration" which emphasized the need for the liberalization of traffic rights among the Arab countries. The Declaration called for the liberalization of the "Five Freedoms of the Air" on a reciprocal basis within the Arab world for international Arab airlines providing scheduled services as follows:

- (a) Exercising the First and Second Freedoms;
- (b) Exercising the Third and Fourth Freedoms in accordance with air traffic requirements between the contracting States;
- (c) Exercising the Fifth Freedom to facilitate connections within the Arab world in order to attain the main objectives of the Declaration.

^{4/} International Civil Aviation Organization (ICAO), Regulation of Capacity in International Air Transport Services, Circular 137-AT/43, Montreal, 1977.

Subsequent sessions of the Council reaffirmed this Declaration and called on Arab States to amend their existing bilateral air service agreements and to conclude agreements with those Arab countries which had not yet done so in order to ensure the implementation of the principles laid down in the Declaration. ACAC also issued general statements of policy regarding the regulation of capacity, scheduled and non-scheduled international services, and concluded an agreement on non-scheduled international services, and concluded an agreement on non-scheduled services.

Unfortunately, however, the Marrakech Declaration and related ACAC policy statements were never implemented and the Council itself was dissolved in 1989 in accordance with a decision by the Arab Economic and Social Council.

In October 1990, the Arab Council of Transport Ministers decided to form a Civil Aviation Committee comprising the directors of civil aviation authorities in the Arab countries to perform some of the ACAC's duties, especially in technical and regulatory fields. At the same time, the Arab Air Carriers' Organization (AACO) intensified contacts with the Committee as well as with the Arab League in order to urgently establish a permanent body to replace ACAC and face the world regulatory challenges and develop a framework for a new aviation policy for the Arab world.

Various deliberations and discussions took place between the Arab League, the Arab Economic and Social Council and the Arab Air Carriers' Organization to find the best way to establish the proposed organization. Very little progress was made until October 1992 when the Arab Council of Transport Ministers met in Cairo and decided to immediately establish an independent and permanent Arab organization for civil aviation. Following the ministerial meeting six directors of Arab civil aviation authorities (Bahrain, Egypt, Jordan, the Libyan Arab Jamahiriya, Morocco and Saudi Arabia) met and decided to implement the transport ministers' decision. They called for a meeting for all Arab civil aviation authorities to be held in Rabat (Morocco) in November 1992 to inaugurate the new organization.

II. CONCEPT OF PRIVATIZATION IN THE INTERNATIONAL AIRLINE INDUSTRY

Privatization is best defined as the process which transfers ownership and control of a state asset to the private sector. This theoretically means the sale of over 50 per cent of an asset to private investors. In reality, though, the term privatization is extended to include cases where Governments sell minority stakes in the assets. During the past decade the trend towards privatization has increased remarkably. The rationale behind such moves was quite simple: privatization will benefit taxpayers because of lower subsidies to a shrinking public sector. Customers will also benefit because privatization means more competition which, in turn, will lead to better quality of products and services and lower prices.

A. Justification

The commercial airline industry was among the first industries to be influenced by the new trend. Governments became increasingly convinced of the advantages of partially or totally privatizing their national carriers. In some cases the objective was to raise capital or to justify new equity while in others the aim was to improve efficiency and increase flexibility. But whatever objective is announced, it is believed that many Governments are captivated by the idea of privatization for one or several of the following reasons:

(a) The rapid liberalization process which is leading the regulatory framework of the international air transport industry towards liberal exchange of traffic rights and steadily diminishing controls over capacity and frequencies;

(b) Mounting competitive pressures from increased liberalization and the increased power of U.S. "mega-carriers" and privatized airlines in Europe and other parts of the world;

(c) Poor financial performance of national carriers and limited scope for vast improvement in yield and unit cost;

(d) Enormous capital requirements of national airlines, especially for the purpose of fleet modernization which is taking place amidst stern restrictions on noisy aircraft;

(e) National debt considerations and the increasing difficulty of poor countries in gaining access to global funds.

The above reasons clearly indicate that moves toward privatization are prompted by pragmatic rather than dogmatic reasons. In general, Governments are becoming increasingly weary of supporting their national carriers. Their greatest worry is the rising price of subsidization which may even become prohibitive. This is particularly true for the Governments of developing countries, which have started to realize that there are more urgent needs than subsidizing flag carriers at an ever increasing cost.

Furthermore, with the concept of air transport liberalization taking hold throughout the world, Governments feel that they can no longer extend unqualified support and protection to their national carriers in the face of increasing competition, and that those carriers should be able to operate on a purely commercial basis. In some instances, the move to private ownership in the airline industry was part of a widespread general policy adopted by many Governments to withdraw from industry ownership and to reduce their controls on certain sectors such as banking, insurance, telecommunications and surface transport. The prime aim of such a policy usually revolves around improving efficiency and increasing profit margins.

B. Efficiency and profitability of private airlines

It has always been argued that the public sector is less efficient than the private sector. Proofs for this argument are almost impossible to obtain due to the fact that the public and private sectors do not usually overlap enough to allow a fair comparison.

In the airline industry, there are many success stories of previously stumbling airlines achieving far better results after being privatized. It is important to note, however, that prior to privatization those airlines were obliged to go through a tedious process which involved work force reduction, network pruning, fleet rationalization, intensive staff training and other measures that are designed to improve productivity and efficiency and reduce costs. It is believed that such measures, rather than the change of ownership, were primarily responsible for the improvement in performance.

However, there is a mounting belief on the part of many Governments that their national carriers can operate far more efficiently in the private sector. The successful experience of privatized airlines such as British Airways often offer an inspiring model. Moreover, a recent study by the New York consultant firm SH&E concluded that private airlines are far ahead of state-owned airlines in terms of productivity. The study reveals that private airlines, which currently account for 43 per cent of the total number of airlines, generate approximately 67 per cent of total revenues.^{5/}

In a paper submitted to an IATA multidisciplinary seminar entitled "Airline Profitability-Reality or Myth", Peter Haanappel of IATA argued that private or privatized airlines can compete effectively with state-owned airlines. Recent history has even shown that private airlines may have a competitive advantage over state-owned airlines, at least when the latter are not subsidized. He expected a decreasing incidence of subsidization and argued that the flag carrier concept is disappearing. He concluded that there was a decreasing interest on the part of Governments in their flag carriers, a decreasing tendency to regulate and certainly a decreasing willingness to pour money into what is no longer perceived as a purely "national asset" or as an object of "national prestige."^{6/}

^{5/} Airline Business, Private lives, February 1992, p. 35.

^{6/} P.P.C. Haanappel, Privatization: Whether or not privatized airlines can compete effectively with state-owned subsidized airlines. A paper submitted to IATA Multidisciplinary seminar for the airline industry, Montreal, 25 September 1991.

It is believed that privatization can provide the incentive needed to replace management and increase efficiency while changing the Government's attitude toward the airline. But the ability of the airline to operate profitably and survive financially in an increasingly competitive market is far more important than the form of ownership.

C. Risks and gains

For airlines undergoing privatization, the result could be loss of government regulatory support and protection which increases the airline's vulnerability to competitive pressures. Additionally, loss of subsidies, if any, would be involved and withdrawal of government financial guarantees.

For Governments, privatization of the national carrier would relieve them of the huge capital-equipment needs of the airline in public-sector borrowing requirements and will save subsidy. In developing countries, this might involve overlooking certain political and social objectives which the airline was supposed to achieve, such as providing employment opportunities, subsidizing exports through low air transport rates or operating routes of political or social significance.

From a nationalistic viewpoint, privatization often leads to reduced nationalism as well as acceptance of foreign shareholding. There are recent cases of cross-border ownership, inter-airline exchange of shares, and investments made by large foreign airlines in others complementing their services (see chapter 5).

An investment by a large, well-developed airline is always attractive to a privatizing airline because it would probably involve the transfer of management expertise and equipment and possibly an immediate or future capital injection. For a privatizing airline this process would improve its corporate structure and bring about the advantages of a more efficient management and less bureaucracy. It would also reaffirm the concepts of profitability, cost controls and higher productivity.

An investing airline, however, would not take the risk of making significant financial commitments were it not confident that the investment was worth while. Most inter-airline investments are usually made in a strategic gateway location of an attractive route network that can enhance the airline's competitive position and complement its marketing capabilities. Meanwhile, investing airlines try to avoid any snags that are detrimental to the success of their investment in other airlines, such as heavy financial and managerial costs, poor service and infrastructure or a bad image.

D. Prerequisites

Investing airlines or other corporations are eager to make the right choice when buying into an airline. To achieve this, they usually examine a number of indicators reflecting the viability of the airline, for example:

- (a) Safety record;
- (b) Fleet age and composition;
- (c) Airline's ability to properly maintain the fleet;

- (d) Route network and available traffic rights;
- (e) Quality of ground and in-flight service and on-time performance;
- (f) Competitive stand, credibility of market image and relations with third parties;
- (g) Quality of top management and availability of highly qualified staff in managerial, operational and technical fields;
- (h) Suitable infrastructure and reliable systems for reservations, ticketing, revenue accounting and management information;
- (i) Value of side activities and subsidiaries;
- (j) Supportive alliances with other airlines.

An airline looking for investors must undertake a lengthy process of restructuring aimed at improving its operational and financial performance before it can attempt to take the privatization road. This may include tighter cost controls, changes in management structure and quality and a remarkable improvement in productivity, perhaps by reducing personnel to become more attractive to investors. It is evident that airlines may be obliged to take some harsh measures before they can reap the benefits of privatization. It is always better to negotiate a privatization deal from a strong position than from a weak one, especially since airlines looking for investors are perceived to be poorly managed.

III. PRESENT STATUS OF PRIVATIZATION IN THE AIR TRANSPORT SUBSECTOR

The trend towards privatization and away from government ownership is one of the most important structural changes occurring in the airline industry. This trend has accelerated rapidly during the past decade and today there are fewer state-owned airlines. Many Governments in various parts of the world have partially or completely relinquished their ownership of airlines or are in the process of doing so.

According to IATA sources, almost half of IATA's some 200 member airlines today are wholly or largely owned by the private sector. In 1975, only 24 of the 88 active member airlines (27 per cent) were wholly or partially under private ownership. Of those 24, only 7 were geographically located outside the Americas. Airlines such as British Airways, Air Canada, Japan Air Lines and Singapore Airlines were among the largest airlines to be privatized, but many others are following suit.

A. World-wide moves toward privatization

According to an IATA report, 41 airlines world-wide have plans to privatize completely or to sell further shares to the private sector. Of these, 15 airlines have either completed full privatization or are on the way. Partial privatization is in progress for 17 other airlines, while the rest are presently considering full or partial privatization.

Table 3 lists ongoing world-wide moves toward privatization as monitored by IATA's Aviation Regulatory Watch Group. The largest grouping of potential sales is in Europe with the involvement of large airlines such as Alitalia, KLM, Lufthansa and SAS. There are also reports on the possible sale of Air France shares to the private sector, but this has not been confirmed so far.

The rapid passenger and cargo traffic growth in Asia and the Far East has been accompanied by a tendency towards privatization adopted by 12 airlines. Floating of airline stock is presently in the making while some have already materialized such as Japan Air Lines, Singapore Airlines, Malaysian Airline System and Air New Zealand. Privatization of Philippine Airlines is expected to take place later this year. The Philippine Government is said to be selling approximately 60 to 80 per cent of the shares with as much as 30 to 40 per cent offered to foreign investors and 10 per cent to employees.

In Australia, after much political debate, it was decided to go ahead with the privatization of Australian Airlines and Qantas Airways.

In Latin America, the trend towards privatization is fairly strong. Since the issuance of IATA's Third Report on Industry Structure in 1990, the number of privatized carriers or carriers in the process of privatization so far has risen to 20. In addition to the airlines included in table 3, carriers privatized as of the end of June 1992 are Avensa, Avianca, Aviateca, Copa, Cruzeiro, LACSA Ladeco, TAN-Sahsa, TACA, SAM and Varig.

Table 3. World-wide moves toward privatization
(as at December 1990)

<u>Europe</u>		<u>North and South America</u>	
<u>Airline</u>	<u>Status</u>	<u>Airline</u>	<u>Status</u>
Air Portugal-TAP	0	Air Canada	0
Alitalia	*	Air Jamaica	*
Austrian Airlines	0	Aerolineas Argentinas	0
British Airways	0	Aeromexico	0
Finnair	0	Austral	0
Iberia	*	LAN-Chile	0
KLM	0	Mexicana de Aviacion	*
Lufthansa	+	Pluna	*
Malev	+	VASP	*
Olympic	+	VIASA	*
Sabena	*	Lloyd Aereo Boliviano	+
SAS	*		
Tarom	+		
THY			

<u>Asia and the Pacific</u>		<u>Middle East</u>	
<u>Airline</u>	<u>Status</u>	<u>Airline</u>	<u>Status</u>
Air New Zealand	0	El Al	*
Air Niugini	+	Royal Jordanian	*
Australian Airlines	+		
China Airlines	*		
Garuda Indonesia	*		
Japan Air Lines	0		
Malaysian Airline System	0		
Philippine Airlines	*		
Qantas Airways			
Singapore Airlines	0		
Thai Airways International	+		
PIA	*		

<u>Africa</u>	
<u>Airline</u>	<u>Status</u>
Nigeria Airways	*
South African Airways	*

Source: International Air transport Association, Developments in Aviation Regulation and Industry Structure in 1990, Third report of the Aviation Regulatory Watch Group, December 1990.

Notes: 0 = Full privatization completed or in progress.
* = Partial privatization in progress.
+ = Full or partial privatization under consideration.

The most recent case of privatization in Latin America occurred in Uruguay where PLUNA (Primeras Lineas Uruguayas de Navegación Aerea) officially launched its privatization campaign on 6 August 1992. It is planned that the

private sector will have a 51 per cent stake while the Uruguayan Government will retain, at the first stage, the remaining 49 per cent. The process comprises two stages: a prequalification of candidates which must be foreign airlines and a final stage in which qualified candidates may apply in concert with non-carrier partners.

It is interesting to note that the Argentine Government, which earlier had privatized its national carrier, Aerolineas Argentinas, raised its stake in the airline from 5 per cent to 32 per cent by taking back shares from local Argentine investors who were unable to inject fresh funds into the airline.

Privatization of South African Airways is reported to be on the Government's agenda, but stock exchange rules require three consecutive years of profitability. Private placements could precede flotation.

In Kenya, the Government plans to sell up to 49 per cent of Kenya Airways shares in 1993 if an airline partner can be found. However, refinancing and restructuring of the airline is expected to come first. Some other African carriers, namely Nigeria Airways, Zambia Airways and Air Zimbabwe are also considering privatization plans as part of a consolidation process.

Many East European airlines are looking for funding through privatization to be able to re-equip themselves with western aircraft. LOT Polish Airlines is reported to have applied to become a joint-stock concern by 1994 with the State keeping 51 per cent of the shares. Balkan Bulgarian, Malev, Adria and Tarom are also seeking funding through privatization.

B. Privatization in the ESCWA region

Plans for privatization of commercial airlines in the ESCWA region are very limited. Most Governments are apparently still reluctant to relinquish partial or total ownership of their national carriers despite the huge financial needs of those airlines during the remainder of this decade. ESCWA-region airlines are presently in the process of modernizing their fleets either to replace old aircraft or to conform with strict noise regulations. The total cost of the fleet modernization programme is estimated at \$US 8-9 billion.

The only airline in the ESCWA region with a definite privatization plan is Royal Jordanian (RJ). After plans dating back to 1987 were abandoned due to the Gulf War, the airline has recently announced that privatization is back on the agenda. Royal Jordanian President and Chief Executive Officer Mahmoud Balqez told Lloyd's List newspaper on 17 September 1992 that privatization will take place in two steps: first, by converting the airline into a public company totally owned by the Government; and second, by offering shares to both overseas and local investors. The RJ privatization plan envisages a substantial Jordanian ownership of the company by the private and public sectors of at least 51 per cent.

The Government of Jordan recently formed a committee chaired by the Deputy Prime Minister to take the necessary steps toward privatizing the airline. The committee is expected to complete its work by the end of 1992.

The airline, which is undercapitalized, hopes to raise enough funds to meet its financial obligations and clear its balance sheet.

The Iraqi Government in 1989 announced its intention to privatize its national carrier, Iraqi Airways. Since then, however, no further action has been taken in this direction due to the Gulf War.

The latest move towards privatization in the ESCWA region was announced by Gulf Air Chairman Salem Ben Ali Al-Sayyabi. The Arabic-language Al-Khaleej newspaper quoted him on 1 September 1991 as saying that Gulf Air intends to attract the private sector of the owner States as shareholders in Gulf Air. The paper also quoted him as saying that the airline is presently striving to produce efficient basic and auxiliary aviation services to assure private investors of the feasibility of their investments.

Most Governments in the ESCWA region are not yet ready to take the privatization road. This could be due to one or more of the following reasons:

(a) Many Governments appear to be unconvinced that their national carriers could be attractive to private investors or could be commercially viable on their own, due to the airlines' poor financial performance and the vital role of direct and indirect state subsidy.

(b) Most ESCWA-region Governments are anxious to show the flag and to keep intact the identity of the airline as a national symbol. They believe that their ownership of the airline is essential for maintaining this role;

(c) Some airlines in the region are fulfilling certain social, economic and political objectives of their countries, and privatization would adversely affect the achievement of those objectives;

It is believed that it will not be long before Governments of the region look seriously into injecting private funds into their airlines as a way to improve efficiency and alleviate their financial burden.

IV. IMPACT OF PRIVATIZATION AND DEREGULATION ON AIR TRANSPORT

The trend towards withdrawal of Governments from industry ownership and economic regulation has left a great impact on the air transport industry. This includes remarkable effects on the industry structure as well as on its performance.

A. Impact on industry structure

The government deregulation measures in various parts of the world have prompted a series of counter-measures by the airlines to defend themselves and adapt to the new regulatory environment. This process amounted to radical changes in the structure of the international airline industry that started in the 1980s and have begun to take a distinctive shape during the past two years.

1. Easier entry and expansion of capacity

The change in U.S. government policy and the renegotiation of US bilateral agreements with other countries brought about concepts of multiple designation and more liberal conditions for expanding capacity and increasing the number of U.S. gateways available to foreign airlines. Similarly, deregulated aviation policy in Europe and other parts of the world has enabled new scheduled airlines to be established and has broken the monopoly of flag carriers.

2. Formation of giant airlines through mergers and take-overs

As the traditionally regulated markets started to open up to increased competition, airlines recognized the need to increase their marketing capabilities so as to be able to compete successfully in the deregulated markets. This trend was clear in Europe with British Airways taking over British Caledonian Airways in 1987, and Air France taking several measures to remarkably increase its marketing strength. Air France at first built up its shareholding in the dominant French domestic airline, Air Inter, and acquired 40 per cent of the largest French regional carrier TAT, then bought 54.6 per cent of UTA (Union de Transports Aériens), the other major international operator in France. More recently, the two major Canadian international carriers, Air Canada and Canadian International Airlines, announced in September 1992 their merger into a single company.

The formation of large airlines increased their market share and thus increased the degree of concentration in their regions. Major international U.S. carriers have been reduced to five with a possibility of a future reduction to only three airlines.

While giant airlines in the U.S. and Europe controlled a major part of the international market, some smaller airlines went out of business while others concentrated their efforts on offering specialized services.

An IATA Watch Group report issued in June 1985 listed seven benefits enjoyed by large airlines:

- (a) The attractions of a large and widespread route network;
- (b) The ability to dominate operations and marketing at large hubs;
- (c) The control of distribution, particularly through computer reservation systems;
- (d) The ability to exercise price leadership;
- (e) The value of network size in "loyalty" marketing schemes such as frequent flyer programmes;
- (f) The variety of markets which allows for cross-subsidization of competitive pricing on certain routes;
- (g) The marketing power of large advertising campaigns, particularly those involving extensive use of expensive media such as television.

It is important to note that, unlike earlier studies which related large airlines strength to economics of scale, the above study identifies marketing considerations as the most important benefits of those airlines.

3. Increased importance of marketing alliances and intensified role of central reservation systems (CRS)

One of the most important measures taken by airlines during the past decade has been the establishment of marketing alliances with other airlines, especially those operating in another region, to gain the advantages of a wider marketing scope without buying shares. The most notable case is that of British Airways, which established in 1987 a world-wide marketing alliance with the U.S. carrier United Airlines to increase its marketing strength beyond its U.S. gateways.

Two other important marketing alliances were noted by the IATA Aviation Regulatory Watch Group in its third report of 1990. The first is that between Swissair, Delta Airlines and Singapore Airlines, covering the coordination of schedules, blocked space arrangements, reservation links, joint marketing and sales, joint aircraft purchasing and maintenance and enhanced cargo cooperation. The three airlines also agreed to a cross-shareholding arrangement under which each takes a 5 per cent equity stake in the others.

The other important alliance was that between Air France, Lufthansa and Iberia. The three airlines agreed to increased collaboration in CRS development, joint scheduling of European services, rationalization of marketing and sales functions, joint operation of some long-haul routes and the establishment of a joint catering company.

The above-mentioned IATA report listed over 350 cases of marketing alliances ranging from straightforward joint-venture operations to management contracts and wide-ranging marketing alliances. More recently, joint ventures and alliances have been established between airlines in Eastern and Western Europe. A joint venture between British Airways and Russia proposes the creation of a new airline, Air Russia, in which British Airways will have a 49 per cent shareholding.

At the same time, the world's major global central reservation systems (CRSs) continued their invasion of travel agencies in various parts of the world. CRSs enable airlines and travel agents to access the reservation systems of hundreds of airlines and offer passengers a multitude of services that were not previously available through a single system. Today there are 13 global central reservation systems in the world and some of them recently announced merger plans which, if completed, would vastly increase their marketing powers. Galileo, the European CRS company, and the U.S. Covia Corporation announced plans to merge into a new company called "Galileo International". The merger is expected to be completed by the end of 1992.

However, CRS is a powerful marketing tool that can be used to distort competition between airlines by displaying incomplete or biased information. This has prompted government intervention through regulation that would ensure the neutrality of these systems.

4. Reduced nationalism and formation of multinational carriers

Reduced nationalism and acceptance of foreign ownership are perhaps the most important long-term effects of privatization. At the same time, although increased private ownership will not automatically eliminate nationalism in international aviation policies, it may prove to be the structural factor with the most profound significance determining the future shape of the world airline industry.

The international airline industry has recently witnessed cross-border ownership pacts involving foreign investments. Table 4 shows the extent of transnational investment in the airline industry. The percentage share of foreign ownership in most cases is below 50 per cent in conformity with the legal limitations on foreign ownership imposed by the countries concerned.

Foreign ownership has become important in the U.S. airline industry because of the European airlines' interest in the domestic route network of U.S. carriers. Four European airlines have so far acquired shares in U.S. carriers: SAS (Scandinavian Airlines System) in Continental, Swissair in Delta, KLM in Northwest and most recently British Airways in U.S. Air. Three other airlines in the Far East and Australia are now also shareholders in U.S. carriers: Japan Air Lines in Hawaiian, Singapore Airlines in Delta and Ansett Airlines in America West.

In Latin America, the strong trend toward privatization was accompanied by a parallel arrangement by which foreign airlines participate in ownership and management. Iberia is now a 30 per cent shareholder in Aerolineas Argentinas and has a 45 per cent stake in VIASA, SAS is a 35 per cent shareholder in LAN-Chile, and TACA of El Salvador owns a 35 per cent stake in AVIATECA of Guatemala.

Within the European Community (EC), the issue of transnational ownership is different because the EC Commission holds the view that substantial ownership and effective control of airlines by nationals of one country is contrary to the Treaty of Rome which provides for free movement of capital and precludes limitations on ownership by nations of another Community country.

Table 4. Major examples of transnational airline investment

Airline	Foreign investment	Percentage of shareholding
Air France	Middle East Airlines	28.5
	Austrian Airlines	1.5
	Euroberlin	51
	Euskal Air (Spain)	20
All Nippon Airways	Austrian Airlines	5
American Airlines	Air New Zealand	7.5
Ansett Airlines	American West	24.5
	Ansett New Zealand	100
Delta Airlines	Singapore Airlines	5
	Swiss Air	5
El Al	North American	24.9
Finnair	SAS	0.1
Japan Air lines	Air New Zealand	7.5
KLM	Air UK	14.9
	Delta Air (Belgium)	--
	Northwest Airlines	4.9
	Austrian Airlines	10
Lufthansa	Cargolux	25
	Interflug	25
	Viva Air (Spain)	50
	Sun Express (Turkey)	40
	Air New Zealand	20
Qantas Airways	Air New Zealand	20
Sabena	Universair (Spain)	49
SAS	Airlines of Britain	24.9
	Continental	16.8
	Finnair	5.1
	LAN-Chile	30
	Swissair	7.5
	Texas Air	9
	Singapore Airlines	Delta Airlines
Swissair	Swissair	5
	Austrian Airlines	10
Singapore Airlines	Delta	5
	SAS	7.5
	Singapore Airlines	5

Source: International Air Transport Association, Developments in Aviation regulation and Industry Structure in 1990, Third Report of the Aviation Regulatory Watch Group, December 1990.

5. Growing trend toward regional regimes

The liberalization and harmonization measures adopted by the European Community have established for the first time a well-identified framework for

the concept of regimes in air transport. In addition to the measures taken so far to liberalize air travel within the community, the EC Commission plans to gradually take over bilateral negotiations between the Community as a whole and third-party countries. This will undoubtedly strengthen the Community's bargaining power but will also have serious implications for non-EC countries.

The newly formed European regional regime raises major concerns for non-EC airlines. They are particularly worried about the uncertainty surrounding the unified Community negotiations of bilateral and other agreements with other countries, and the possible loss of Fifth Freedom rights within Europe. They are also concerned about the emergence of more powerful European airlines from transnational alliances and mergers and the multiple designation of EC airlines on routes to non-EC countries.

Some non-EC countries responded to the European developments by forming their own regional groupings and alliances, e.g. the European Free Trade Association (EFTA), the alliance between Australia and New Zealand as well as the South Asian Association for Regional Cooperation (SAARC).

It is believed that this decade will witness more regional consolidation and cooperation among the airlines, aimed at protecting their interests and organizing their efforts to face other challenges.

B. Impact on industry performance

Deregulation of international air transport in certain areas has created a downward pressure on yields due to increased competition and the abandonment of IATA tariff rules in these areas. The most important route area to witness such an impact is the north Atlantic, which was subject to sharp fluctuations in fares and rates due to predatory price undercutting, competition from charter operators in the early years of deregulation and the change in traffic mix in favour of low-fare market segments.

Following the drop in average yield in deregulated route areas, airlines became more intent on controlling capacity and improving their seat and load factor to compensate for the decline in yield and to achieve profitability.

On the industry level, yields have been growing at an average rate lower than that of unit cost. During the period 1978-1988, the average yield of IATA international scheduled services grew at an average annual rate of 2.6 per cent per annum against a unit-cost average growth rate of 3.5 per cent. At the same time, the industry passenger-seat factor increased from 62 per cent in 1978 to almost 68 per cent in 1988. Deregulation has also led to higher traffic growth rates in the liberalized market due to increased leisure traffic and first-time travellers attracted by the reduced fares.

The privatization trend has been accompanied by policies geared towards improving the operational and financial performance of airlines. The importance of profitability increased remarkably to satisfy shareholders of privately owned airlines or to attract investors to privatizing carriers. International airlines are now exercising more cost controls and focusing on productivity levels and managerial efficiency. To achieve this, some airlines have adopted policies encouraging employee participation in ownership, which has a positive influence on motivation and could reduce the disruptive effects of labour disputes.

V. PROSPECTS OF PRIVATIZATION AND DEREGULATION IN THE ESCWA REGION

The future of privatization and deregulation in the ESCWA region depends to a great extent on future world developments in this field and the airlines' operating and financial performance.

A. Future world developments

The international airline industry in passing through a very delicate and exciting stage of development which will eventually change the regulatory framework of the industry. Several attempts have been made to identify the features of the next stage. The International Civil Aviation Organization (ICAO) held the world-wide Air Transport colloquium in Montreal during the period 6-10 April 1992 to discuss the future regulatory arrangement in the light of accelerated world developments. During the Colloquium, more than 500 participants from 101 ICAO member States and 19 international organizations heard and debated presentations and views from some 40 speakers and panelists. Participants perceived that the change towards greater multilateralism in air transport is imminent and that ICAO should play a major role in anticipating that change and taking appropriate measures rather than merely observe it or react to it.

It was noted that the growing trend towards foreign and multilateral ownership of airlines does not contradict the Chicago Convention or typical existing bilateral agreements. However, with such ownership, there arises a need for a new link to a designating State to replace the "substantial ownership and effective control" vested in the State or its nationals. Similarly, cabotage, or the carriage of domestic air traffic by a foreign airline, is not prohibited per se by the Chicago Convention and may see wider applicability, especially in unified markets.

Negotiations between groups of States and individual States were not seen by the Colloquium as imminent. Groups of States needs to finalize their own regional arrangements before negotiating in a systematic fashion with other parties. It was agreed that no common ground has yet been identified for a broadly acceptable, world-wide, multilateral mechanism for the exchange of international air service rights. Several fundamental problems, particularly those pertaining to access and safeguards, remain to be resolved. Therefore, it was clear that in the short term there would be a mixed regulatory system of perhaps overlapping bilateral, "plurilateral" and multilateral agreements before the international system took its final shape.

The Colloquium presented an opportunity for the exchange of ideas and stimulating discussions. ICAO plans to take this vital matter further by inviting a limited number of recognized air transport thinkers and analysts from all parts of the world to design some useful new regulatory arrangements for the 1990s.

Several prominent industry leaders and analysts have already contributed to the ongoing discussions about the future of the airline industry. Some of

them^{1/} agree that the present trend of liberalization and privatization will prevail throughout the world. Air transport will increasingly become, like any other international industry, dominated by a small number of very large multinational companies. It is also argued that those airlines will be free from almost all forms of regulation which apply to other industries.

Sir Colin Marshal believes that by the year 2005 the industry will have open skies and there will be relatively few -- perhaps eventually only half a dozen -- airlines that will have to come about through alliances or partnerships, leading in due course to mergers and take-overs when regulations permit.

Stephen Wheatcroft argues that the airline industry will become a world-wide oligopoly with transnational ownership much like the oil, petrochemical and automobile industries. The role of small airlines will be in specialized fields such as development of home territories and promoting tourist traffic in addition to acting as feeders to the "giant airlines".

Some strong views such as allowing foreign control of airlines may not materialize soon in various parts of the world because of certain limitations pertaining to national defence and the strategic importance of the flag carrier. Some argue that a developing country cannot afford to rely on the good intentions of foreign airlines. Royal Air Maroc's President Mohammed Mekouar told Airline Business Magazine in June 1992 that no Government will ever permit the majority of capital in an airline to be owned by foreign interests and that as soon as there is a crisis in the country, foreign airlines draw back.

It is believed, however, that there is a clear and irreversible world-wide trend toward a liberal industry that will be subject to radical structural changes. West Asian airlines should be alerted by the above developments, which will inevitably have a significant effect on the structure of the region's air transport sector.

B. The effect of the present situation

The 12 scheduled international airlines of the ESCWA region have been operating under an umbrella of government protection and support. This had minimized competition and enabled them to temporarily overcome their inherent economic shortcomings of high unit-operating cost, low seat and load factors and generally poor performance which is often masked by direct and indirect government subsidies. The main features of the present situation of the airline industry in the ESCWA region could be summarized as follows:

^{1/} See, for example, the interview with Sir Colin Marshal, Chairman and Chief Executive Officer of British Airways, Newsweek, August 17, 1992 p. 40, and addresses of Stephen Wheatcroft and George W. Games to the IATA high-level aviation symposium entitled "Beyond 1992: Implication and Prospects for World Aviation, pp. 60-65 and pp. 71-79. IATA 6-8 June 1991.

(a) There is a large number of airlines in relation to total traffic potential, resulting in small market share per airline. The total number of passengers carried by the 12 west Asian airlines on their scheduled international services (about 13 million in 1989) is not far from the size of the traffic carried on individual major airlines such as British Airways (18 million), Air France (13 million) or Lufthansa (12 million);

(b) Low route density due to limited demand potentialities in individual national markets as well as the operation of a large number of low-frequency parallel services between the region and various parts of the world result in high unit-operating cost. Low route density has also encouraged a significant number of the region's airlines to increase their reliance on low yield transit traffic, which further worsens the economics of operations;

(c) Sharp seasonal variation in traffic result, together with low route density, in the achievement of generally low seat and load factors. In 1989, west Asian airlines achieved a seat factor of 61 per cent against an IATA average of 68.1 per cent and a load factor of 55 per cent against IATA's 64 per cent.

(d) There is poor marketing coverage and limited strength in comparison with major airlines as well as an inability to act as price leaders due to small market share and high cost of operation;

(e) High sensitivity to political and economic circumstances result in fluctuating volumes and reduction in traffic growth rates. At present, traffic is growing at fairly modest rates, far below the impressive growth rates of 20-25 per cent per annum achieved during the late 1970s and early 1980s;

(f) There is complete or substantial reliance on Government for the necessary capital to meet the requirements of fleet modernization plans. These take the form of either actual funds or guarantees.

The above factors have long discouraged new entrants from applying for the establishment of scheduled airlines. At the same time, government policies of protectionism and unqualified support for the national flag carriers gave those airlines very little incentive to rationalize their operations and increase operational and managerial efficiency to be able to operate on a purely commercial basis. The present attitude of the ESCWA Governments towards their national carriers, with one or two exceptions, is not conducive to privatization and does not allow for more flexible capacity clauses in bilateral agreements. In fact, the limited information available in recent bilateral talks within the ESCWA region points to a continuation of the protectionist trend and reaffirms the Governments' stance towards deregulation. Some west Asian Governments may still think that they will always be free to implement their present, strict policy on routes to and from their home countries and thus protect the interests of their national carriers from the new winds of change. It is important to note, however, that the implementation of protectionist policies adversely affects the ability of national carriers to obtain traffic rights and limits their development and expansion. Furthermore, such regulations will soon be outdated as the world

aviation community, through ICAO and regional organizations, is now in the process of defining new regulatory frameworks which are generally characterized by more flexible and liberal economic regulations.

C. The need for regional action

Amidst accelerated and serious international developments, the region's Governments appear to be still undecided about the form and timing of the action they intend to take in response to these developments. This has further been aggravated by the absence of regional organizations representing the civil aviation authorities in western Asia and acting multilaterally on their behalf when the need arises.

There is an urgent need for significant changes in the air transport sector of the ESCWA region. The ability of each airline or Government to effect the needed changes unilaterally is very limited. What is needed is a close intergovernmental as well as inter-airline coordination and cooperation to agree on a regional plan aimed at improving airline operating conditions and at facing competitive challenges. The plan would also help the Governments and the airlines of the region to formulate a clear policy on important issues such as ownership and bilateral/multilateral agreements. The main features of the plan may be summarized as follows:

(a) Formulation of a more liberal regulatory framework for the ESCWA air transport industry based on the following concepts:

- (i) A more liberal attitude towards granting traffic rights to the region's airlines within the region to enable them to consolidate traffic on various routes and intensify the utilization of the region's route system. The Marrakech Declaration could be used as a basis for such a policy which should also include safeguards to ensure fair and equal opportunity;
- (ii) Formulation of general policy guidelines for negotiating traffic rights with other States or groups of States, aimed at strengthening the bargaining position of and maximizing the benefits to the region's airlines;
- (iii) Introduction of a flexible fare-fixing system for the region to bring about healthier competitive conditions and to boost traffic growth;

(b) Formation of a new independent regional organization to replace the dissolved Arab Civil Aviation Council (ACAC) and perform the council's original technical role and deal with present and future international developments and challenges. This organization should be given the required support and its activities in the regulatory field should be coordinated with those of the Arab Air Carriers' Organization AACO through a high-level standing committee;

(c) Rationalization of the route networks of various airlines to adequately meet demand and avoid excess capacity. Joint operations should be encouraged due to their benefits in improving seat factors and increasing productivity;

(d) Inter-airline cost-saving measures should be promoted to improve the financial performance of the industry. This includes the establishment of joint ground, handling, catering and maintenance facilities, joint purchasing of fuel, joint insurance etc.

(e) The merger of ESCWA carriers to form a smaller number of airlines, perhaps 2-3 airlines, each carrying the flag of its shareholding States. This would enable each airline to rationalize its services, attain the marketing and competitive advantages of large airlines and improve its financial performance. The grouping of airlines of adjacent countries could be implemented successfully, especially if there is a similarity in the operational, financial and regulatory conditions of the region's airlines;

(f) Privatization of national airlines would facilitate mergers and transnational ownership and would involve the private sector in financing the airline industry. It would also improve productivity and managerial efficiency and provide the airlines with the necessary flexibility to be able to operate on a purely commercial basis.

The above features form a very ambitious plan whose success is a function of time, effort and conviction. It is believed, however, that consolidation and deregulation are the two key factors most conducive to the viability of the region's airlines. The formation of larger airlines that are more efficient and more competitive together with the removal of ownership restrictions and boundaries would ensure the airlines' ability to face the imminent challenges. The Governments and the airlines of the region should not only react to international developments but systematically define their role in the new world air transport order and restructure their industry accordingly.

Finally, it is believed that moves towards privatizing scheduled flag carriers in the ESCWA region will take a fairly cautious and gradual approach because of the political and social considerations involved. Such moves should, however, be studied carefully to ensure their success in improving performance and in reconciling the airlines' public objectives with those of the private sector.

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