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# Services, development and trade: the regulatory and institutional dimension

**Note by the UNCTAD secretariat**

*Executive summary*

Infrastructure services foster economic growth and development, contributing to the achievement of the Millennium Development Goals. Infrastructural development continues to be a major element of post-crisis growth strategies. Provision of infrastructure services is increasingly marked by the diversity of approaches and players (public, private, public–private), and so are the regulatory and institutional frameworks that govern the operation of the sectors. “Trial and error” in search of a regulatory framework best fit to national and sectoral specificities is common. Regulations of infrastructure services need to be embedded in a comprehensive and integrated growth and development strategy. The role of developmental State in achieving socially efficient and equitable outcomes is critical.

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# Introduction

1. Maximizing the positive contributions of infrastructure services sectors (ISS) to pro-development outcome requires good regulation and institutions able to promote domestic supply capacity, a competitive environment, and sustained trade and investment flows. There is no single prescription for good regulation. Regulatory and institutional frameworks (RIFs) need to be adapted to individual countries' specific needs and circumstances, and this requires sound and sustainable regulatory and institutional capacity at the national level. The ability of countries to formulate RIFs is impacted by international trade and the trading system. Sound RIFs are prerequisite for effectively harnessing gains from trade. Trade, trade liberalization and regulatory policies need to be coordinated within an integrated and coherent development strategy.

# I. Economic trends

2. ISS constitutes an important part of national economy in its own right but also as an essential input to all economic activities. It plays a critical role in the global supply chains. Existing literature and UNCTAD's research strongly suggest a positive association of the infrastructure quality and an economy-wide competitiveness and income levels, demonstrating the nature of ISS as an agent of economic growth. ISS are highly capital–intensive. Such investment not only fosters growth and productivity of ISS but also of sectors that use infrastructure-related services as inputs in their production process. Diversification into services sectors, including ISS, hence, constitutes important new-generation growth strategies for developing countries.

Table 1
**Share of ISS in total output, employment and trade in services (%)**

| **Sectors** | **GDP (mid-2000s)** | | **Employment (2008)** | | **Services exports (2009)** | |
|---|---|---|---|---|---|---|
| | World | Developing countries | World | Developing countries | World | Developing countries |
| Communication | 2.4 | 2.0 | 5.9 | 5.9 | 2.6 | 2.8 |
| Transport | 3.6 | 4.9 | | | 19.5 | 22.9 |
| Electricity, gas and water | 2.5 | 3.3 | 0.8 | 1.0 | -- | -- |
| Finance | 5.1 | 2.7 | 2.9 | 1.8 | 10.0 | 4.9 |
| **Total** | **13.6** | **12.9** | **9.6** | **8.7** | **32.0** | **30.6** |
| Related services | 2.9 | -- | 3.0 | -- | -- | -- |

*Source:* UNCTAD calculations based on UNCTADstat, ILO KILM, OECD STAN and Eurostat.

3. Total output in global ISS is estimated at $8.6 trillion in 2010, or 13.6 per cent of the world total output (table 1), compared to $7.9 trillion in 2009. If "related services"[1] are included, the value rises to $10.4 trillion (16.5 per cent). Financial services are the largest of all ISS sectors ($3.2 trillion, or 5.1 per cent of the world GDP in 2010). This is followed by transport, energy and communication. Developing countries represent 30.5 per cent of the world ISS output in 2010. Transport is the most important sector for developing countries, while the share of financial services in GDP is markedly small. This reflects the

[1] Include services auxiliary to transport and financial intermediation.

importance of transport associated with merchandise exports and movement of people, while the degree of financialization of the economy, and sophistication of financial services, is limited in many developing countries.

4. ISS, particularly energy, are capital–intensive and less labour–intensive. However, their contribution to employment creation by fostering economy-wide growth is significant. In 2008, ISS absorbed 291 million workers, or 9.6 per cent of world total labour force. This share is smaller than that in output (13.6 per cent). Particularly, electricity, gas and water sectors register low labour intensity. Developing countries show an even smaller concentration of employment in ISS for 2005–2008 (e.g. 4.8 per cent in Africa excluding South Africa), as many countries rely on agriculture.

5. With technological advances and lowering transport and communication costs, trade in ISS is increasing. The value of global exports in ISS services reached $1.1 trillion in 2009, equivalent to 32 per cent of world total services exports. The share of developing countries in it increased from 24.4 per cent to 28.4 per cent ($300 billion) in the last decade. This share is, however, smaller than their shares in the world's merchandise exports (43.6 per cent in 2009), indicating relatively low specialization of many developing countries in infrastructure services. Provision of infrastructure services through Mode 4 may be significant with remittance flows to developing countries reaching $347 billion in 2011. In all regions, transport is the largest sector despite its small share in GDP (table 2).

Table 2
**Share of ISS and its components in total services exports by region, 2009 (%)[a]**

| | Transportation | Communication | Finance | ISS |
|---|---|---|---|---|
| **World** | 19.5 | 2.6 | 10.0 | 32.0 |
| **Transition Economies** | 30.8 | 3.5 | 2.7 | 37.0 |
| **Africa** | 24.1 | 3.9 | 2.9 | 30.9 |
| **Latin America** | 19.1 | 2.9 | 4.8 | 26.8 |
| **Asia** | 22.3 | 2.6 | 5.5 | 30.4 |

[a] Computed from a sample of 148 countries with full sectoral data for 2009.

*Source:* UNCTADstat.

6. In 2009, developing countries increased their share in world total exports to 34.9 per cent in transport and 32.9 per cent in communication, but only to 14.7 per cent in financial services. Asia accounts for some 80 per cent of these exports. Developing countries' dynamic export growth was driven by some competitive exporters (table 3). However, their trade balance in respective sector, and "revealed comparative advantage (RCA)" indices[2], indicate that, of 30 cases of leading developing country exporters in different sectors, there are only 15 incidences of trade surplus and 17 incidences of the RCA value greater than one (indicating a country's relative specialization in the sector). This suggests that even countries having gained a sizable market share have not established a strong export base.

[2] RCA indices use the trade pattern to identify the sectors in which an economy has a comparative advantage by comparing the country's trade profile with the world average.

Table 3
**Leading developing country exporters in ISS, 2009**

| *Communication* | Exports ($billion) | Share in world exports (%) | Trade balance ($billion) | RCA [a] |
|---|---|---|---|---|
| Kuwait | 6.9 | 7.8 | 6.7 | 23.8 |
| India | 1.4 | 1.6 | 0.1 | 0.6 |
| Singapore | 1.3 | 1.5 | -0.3 | 0.6 |
| China | 1.2 | 1.4 | -0.0 | 0.4 |
| Indonesia | 1.0 | 1.2 | 0.5 | 2.9 |
| | | | | |
| ***Transport*** | | | | |
| Singapore | 30.7 | 4.6 | 4.2 | 1.7 |
| Republic of Korea | 28.9 | 4.3 | 5.5 | 2.0 |
| Hong Kong (SAR, China) | 23.7 | 3.5 | 11.4 | 1.4 |
| China | 23.6 | 3.5 | -23.0 | 0.9 |
| India | 11.0 | 1.6 | -24.4 | 0.6 |
| | | | | |
| ***Financial*** | | | | |
| Hong Kong (SAR, China) | 11.8 | 3.4 | 7.8 | 1.4 |
| Singapore | 10.7 | 3.1 | 5.5 | 1.2 |
| India | 4.9 | 1.4 | -2.9 | 0.6 |
| Republic of Korea | 2.8 | 0.8 | 1.3 | 0.4 |
| China | 2.0 | 0.6 | -10.0 | 0.2 |

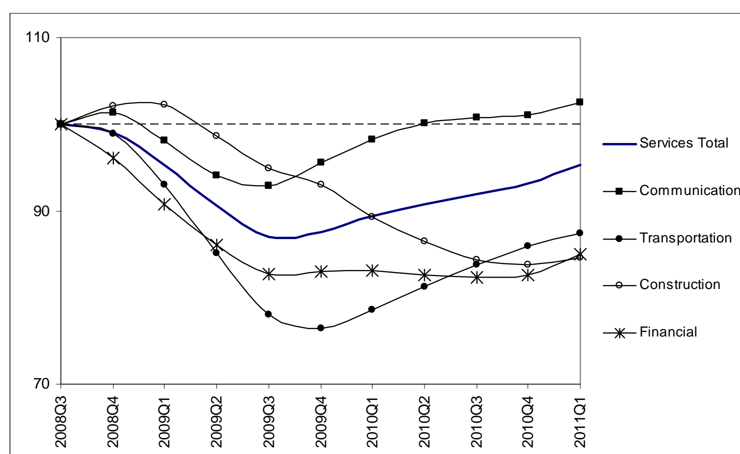
[a] Revealed comparative advantage. Value greater than one indicates that share of particular services in total services exports is greater than world average.

*Source:* UNCTADstat.

7. By the first quarter of 2011, global infrastructure services exports were still 10–15 per cent below their pre-crisis levels, with the exception of communication services (figure 1). Recovery in financial services is weak, reflecting continued uncertainty associated with the sovereign debt crisis. Transport, the second largest services category, bottomed out in 2010, driven by upturn in merchandise trade and travel/tourism, but remained at below the pre-crisis level. In travel services, representing one quarter of trade in services, the number of tourist arrivals reached 940 million and is expected to grow by 5 per cent in 2011.[3] Communication and related ICT services continued their dynamic growth, as reflected in vibrant demand, particularly in emerging markets, for mobile phone and mobile-broadband subscriptions and Internet users.

[3] IATA (2011). Annual report 2011.

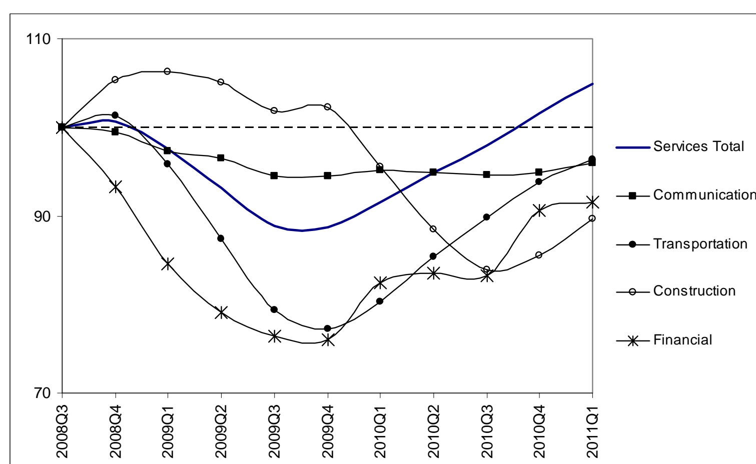
Figure 1
**World exports of selected services categories, 2008Q3=100**




*Source:* UNCTAD calculations based on IMF Balance of Payments Statistics.

8. Developing countries and economies in transition followed different trajectory from developed countries (figure 2). Their recovery in financial and transport services has been stronger than in developed countries, as buoyant real economic activity has lifted their ISS exports. The recovery in ISS exports underperformed total services exports.

Figure 2
**Developing and transitions economies' exports of selected services categories, 2008Q3=100**




*Source:* UNCTAD calculations based on IMF Balance of Payments Statistics.

9. Foreign direct investment (FDI) directed at ISS has been increasing. From 1990–1992 to 2007–2009, world FDI inflows to ISS increased from $37 billion to $497 billion, or one third of global FDI inflows ($1.6 trillion). The bulk of this amount ($352 billion) was destined to the financial sector. In the same period, the share of developing countries in global FDI inflows into ISS decreased from 22.2 per cent to 20.7 per cent as global inflows in finance expanded at a much faster pace. South–South FDI is gaining prominence. Developing countries' share in world ISS FDI outflows reached 9 percent in 2009, from virtually zero in 2000, with Hong Kong (China) and China emerging as major investors.

10. The investment gap in ISS is estimated at 1.7 per cent of global GDP or $1 trillion in 2009, as compared to the estimated annual investment requirement of 3 per cent of world GDP over the next decade. For example, interconnection in electricity networks are often congested; there appears to be little net-addition to generation capacity since late 1980s.[4] While 70 per cent of financing for infrastructure is provided publicly, 20 per cent are by private investors. Private investment, including cross-border investment, has become an important mode of financing. Bridging sustainably the financing gap is critical.

# II. Regulatory trends in ISS

11. ISS performance is sensitive to regulations and such sectors are highly regulated. Adapting regulations to evolving market structures, technological advances, competitive forces, external environment and new policy priorities are major items on the regulatory agenda.

12. In relation to energy and transport services, governments are giving increasing attention to renewable energy. For example, the European Union's (EU's) Directive for Renewable Energy (2009) seeks to achieve a binding target of 10 per cent of transport energy from renewable sources by 2020. Subsidies are among the key regulatory instruments. In 2008, the value of subsidies to renewable energy amounted to $43 billion–$46 billion worldwide as compared with $557 billion received by fossil fuels. Such subsidies include those provided in the form of "feed-in tariffs" (guaranteed electricity prices). In India, renewable energy companies benefit from tax holiday and preferential tariffs. In West Africa, the use of bio-gas as a source of fuel in rural areas is promoted through consumer subsidies. In road transport, EU is revising its Energy Tax directive to make energy taxation fuel neutral from 2023. In maritime transport, the International Maritime Organization (IMO) has adopted a mandatory use for all new ships of Energy Efficiency Design Index.[5] In air transport, the EU Emissions Trading System requires all airlines operating into the EU area to purchase permits of any $CO_2$ emission exceeding the free allowances quota.

13. Regulators of telecommunication and ICT services face the challenge of continuously assessing, and adapting regulations to, the exponential technological advances and new services to meet divergent needs of stakeholders.[6] Competition in the sector has increased. The reform of licensing regimes (e.g. the United Republic of Tanzania, Kenya and Malaysia) focusing on simplified authorization procedures, including for 3G services, contributed to the growth of mobile broadband penetration.

14. Rapid expansion of ubiquitous networks and convergence has called for regulatory adaptation enlarging the mandate of separate regulators to adopt different institutional structures. Moreover, increased pervasiveness of information and communication technologies (ICTs) in multiple sectors of economy (e.g. health, education, finance and privacy) has made a coherent cross-cutting ICT regulation a necessity. Ever-growing demand for high-speed broadband services is likely to increase investment needs for network expansion and upgrade, effective regulation of allocation and competition in infrastructure sharing, spectrum pricing and network use, and ensuring universal access to broadband services. ITU's Best Practice Guidelines (2011) called for inter alia (a) leveraging on public–private partnerships and modernizing universal service programmes to develop broadband infrastructure; (b) fostering private investment, inter alia by

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[4] Sutherland *et al.*, 2009

[5] For further information, see UNCTAD, *Review of Maritime Transport 2011.*

[6] For further analysis, see UNCTAD, *Information Economy Report 2011.*

rationalizing licensing regimes and increasing spectrum available for mobile broadband; and (c) enhancing research and development investment, including by using universal access service funds.

15. Increased prevalence of mobile devices in accessing networks has facilitated the access of low-income consumers to IT-enabled services and the creation of ICT micro-enterprises. Innovative services (e.g. m-banking and mobile money services) have expanded access to banking services. Estimates suggest that 364 million low-income, unbanked people could be using mobile financial services by 2012. This is expected to facilitate cross-border banking services, including in remittances transfers. This points to the necessity of converging ICT and financial services regulations. Governments will need to pioneer sound RIFs, and international community to support their efforts. High costs of international mobile roaming services need to be addressed, including by promoting effective competition. Improving consumer awareness and transparency (e.g. rates), and addressing wholesale and/or retail price regulations, are important.

16. The complexity of designing RIFs, and recurrent regulatory failures, have made improving the quality of regulations a universal concern. Self-improvement by regulators is found to be insufficient. Countries have increasingly opted to establish regulatory oversight bodies (e.g. Australia's Office of Best Practice Regulation) to serve as "regulator of the regulators" to ensure policy coherence and efficiency and quality standards through regulatory impact assessments. Such initiative could provide some useful lessons to other countries.

# III. Effective and efficient RIFs

17. Market failures (externalities, information asymmetries and monopolistic market structure) characteristic of the sectors justify economic regulation. The questions that arise then are how that regulation is best carried out, at what cost, how to tailor it to be in proportion to the nature of the market failing and toward what purpose. Unbundling of vertically integrated network ISS has introduced competition, transforming the role of the States from the one of provider to regulator. They exercise regulatory power by issuing, monitoring and enforcing licenses with conditions, setting tariffs and technical standards, and resolving disputes. Governments pursue multiple public policy objectives through regulation, with the ultimate goal of inclusive and sustainable development.

18. While a template of regulations based on privatization and private sector have been stressed, research and experience suggest that no "one-size-fits-all" model for RIFs exists that apply to all countries and all situations. "Trial and error" is common as regulatory reform is an incremental process that needs to be paced and sequenced, and implemented by various stakeholders. Given the mixed results in privatization and public–private partnerships (PPPs), and the State's continued provision, optimizing RIFs to address the diversity of suppliers has become a major issue. No conclusive evidence exists on the relative merit of private over public provision. Sectoral regulations must be anchored in integrated and comprehensive trade and development strategies, and made coherent with a range of policies – development planning, macroeconomic, industrial, social, trade, competition, consumer protection, environment, industrial and employment policy.

**Box 1. Regulatory reform of electricity services in the Republic of Korea**

In the Republic of Korea, a State-owned company (KEPCO) was responsible for generation, transmission and distribution of electricity. Late 1990s, the country embarked on regulatory reform to introduce competition in three stages. In stage 1, generation unit was to be split into six generation companies while KEPCO was to manage transmission and distribution. In stage 2, distribution was to be unbundled from KEPCO and the transmission system to serve as a common carrier. In stage 3, the distribution network was to be privatized. By 2002, six generation companies were unbundled from KEPCO and compete in the wholesale market. In 2001, Korea Power Exchange was established as was the Korean Electricity Regulatory Commission.[7] Setting prices reflective of cost is a challenge owing to the need to support industrial competitiveness and standard of living. For energy savings, recently, electricity price has increased to cover cost.

19. At the heart of the regulatory problem is the existence of tradeoffs among four regulatory objectives: (a) sustainability (in generating sufficient revenues to cover costs); (b) allocative efficiency (in ensuring that cost of production send right signals for consumption and investment); (c) productive efficiency (to provide incentives for firms to minimize cost of production); and (d) equity (in ensuring universal access to essential services).

## A. Pricing regulation

20. Price regulation lies at the core of ISS regulation. The challenge is to set the price at a level that is fair and reasonable to promote competition, allows investors to recover costs, and ensures affordable services to consumers. This requires regulatory sophistication, including accounting and data. Enhanced transparency through independent auditing is thus important. Political pressure to introduce cost pass-through is another challenge. One practical solution is to embed key elements of the price formula into concession bids so that the most appropriate formula could be defined through competitive process. The three main pricing methodologies – rate of return, price caps and revenue caps – have been variously used.[8] Price caps are most extensively used in telecommunication, and rate of return method, in electricity, water and transport. Revenue caps have the advantage of allowing operators to increase profit by encouraging energy savings by consumers but implementation may be challenging. While no rule of thumb exists, some "hybrid" approaches have yielded results.

[7] Ministry of Knowledge Economy of the Republic of Korea, *White Paper* 2010.
[8] *Jon Stern (2010).* The regulatory and institutional dimension of infrastructure services, UNCTAD.

**Box 2. Electricity price regulation in the United Kingdom**

In the United Kingdom's island of Guernsey, the publicly owned electricity company, Guernsey Electricity (GEL), is regulated by the Office of Utility Regulation (OUR). GEL complained that the price cap system in place did not allow it to recover its costs as the price was set too low. The review conducted by Regulatory Policy Institute (RPI) questioned the price cap regulation approach. Consequently, OUR decided to discontinue the price cap regime and adopt a revenue cap approach that allows the utility more flexibility to establish its tariff. The new regime implemented by the OUR allows GEL to raise its revenues by 6.5 per cent.

*Source*: George Yarrow and Christopher Decker. "Review of Guernsey's utility regulatory regime", 2010

## B. Ownership

21. Experience and evidence suggest that the quality of regulations and institutional capacities, rather than ownership, matter more as determinants of ISS performance. Indeed, after many liberalization episodes, ownership structure is diverse, and State-owned enterprises (SOEs) remain a valid option, particularly in developing countries. This highlights the need to calibrate regulatory approaches.

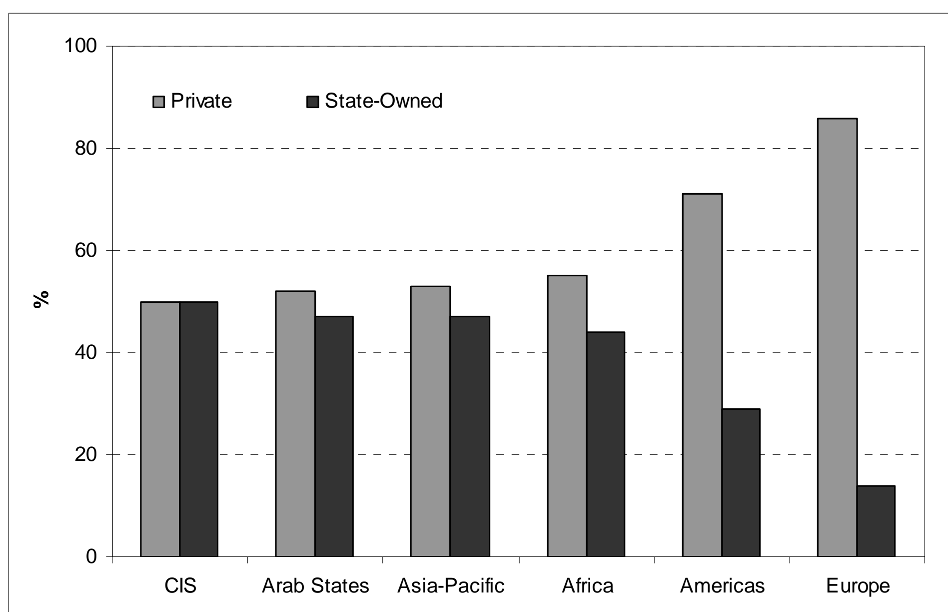
**Box 3. Water nationalization in Uruguay**

In the 1990s, privatization of water services was pursued as a solution to the poor performance of publicly owned water monopolies. However, poor performance persisted in many cities. In Uruguay, water and sewage services were provided by 15 private companies and the publicly-owned company Obras Sanitarias del Estado (OSE). OSE had the exclusive water provision monopoly in Montevideo and almost all of the national territories accounting for over 90 per cent of connections. In 2004, private water suppliers were nationalized following an amendment to the Constitution prohibiting the private provision of water. Using water-related child mortality rates and quality benchmark as a proxy for access to safe and clean water, a recent UNCTAD study finds that, after the nationalization, child mortality rates declined and the quality of water improved, supporting a proposition that the public sector is just as competent as private sectors.

*Source*: UNCTAD, *Services, Trade and Development*, 2011.

22. Private sector participation can take various forms, ranging from full private ownership to contract-based private management without ownership (e.g. concession contracts, lease contracts, management contracts) or a hybrid of both. Private participation is relatively high in telecommunication, power generation and ports, but remained limited in roads, rail, power and water distribution. In telecommunications, 66 per cent of incumbents are fully or partially privatized (figure 3). The performance of private sectors in improving services has been mixed, and this is partly attributable to inadequate regulations, especially in setting prices. For successful PPPs, appropriate RIFs and political commitment to ensure investor confidence is important. This can be done by benchmarking quality and quantity of services in contract, including performance-based, multi-year tariff-setting system ("regulation by contract").

Figure 3
**Status of the main fixed-line incumbent, 2010**




*Source:* ITU World Telecommunication/ICT Regulatory Database.

23. Regulations of SOEs have focused on ensuring that they address their internal corporate governance. Key measures include greater decision-making autonomy for the board of directors and rigorous disclosure of conflicts of interest. Incorporating incentives for good managerial and staff performance, such a performance benchmarking, can produce positive effect. For example, in water supply in Viet Nam and Singapore, salaries and promotions are based on institutionalized performance reviews, and seniority, to reward and retain skilled workers. In Uganda, benchmarks on overall performance are based on energy consumption and revenue collection.

## C. Competition and consumer protection

24. Anti-competitive behaviour of dominant firms is a major threat to effective RIFs. When an incumbent controls essential infrastructure, it can discriminate against new entrants in accessing network (e.g. telecommunication and electricity distribution).[9] An incumbent that operates both in competitive and uncompetitive markets of the value chain can take advantage of cross-subsidization. Competition policy is important to eliminate such anti-competitive practices. The introduction of competition in a retail market needs also to be complemented by consumer protection measures. In liberalized sectors, high switching costs from an incumbent are key impediments for consumer interest. High switching cost can point to a practice of abuse of dominance by the incumbent provider.

[9] UNCTAD Study on Competition in Energy Markets (TD/B/COM.2/CLP/60), 2007.

**Box 4. Consumer protection in the energy sector**

In the United Kingdom, since June 2011, the six major energy suppliers supplying 99 per cent of United Kingdom households increased their tariffs. The United Kingdom's energy sector regulator (OGFEM) finds that such price hikes increased their profit margin from £15/year per customer to £125/month. The agreement reached by a Consumer Energy Summit convened by the United Kingdom Prime Minister in October 2011 identified a set of measures to reduce the energy burden – *Check, Switch & Insulate to Save.* "Check," in helping customers check alternative cheaper way to pay their bills; "switch", in allowing customers to switch to a cheaper energy firm more easily; and "insulate", in promoting energy efficiency through Government and supplier's initiatives.

*Source:* http://www.decc.gov.uk/en/content/cms/news/consumer_summi/consumer_summi.aspx.

## D. Universal access

25. Regulatory measures are required to extend the network to the unconnected and make such services more affordable to those already connected. Consumer subsidies have been provided through pricing and direct subsidies while universal access funds (e.g. to support community-based initiatives), universal services obligations (USOs) have been often used to expand network. Experience suggests that USOs should be realistic and their implementation mechanisms clearly defined. The use of new technology such as mobile telephony can facilitate cost-effective expansion of telecommunication and financial services. Securing adequate financing, and effective implementation, of universal access funds are among the common difficulties.

**Box 5. Universal access in broadband network**

The development of next-generation broadband networks is a key concern for regulators. Seventy countries have adopted national strategies to promote broadband, most of which focus on building nationwide broadband infrastructure and providing public services online (e-health, e-education, e-government, e-business). Rwanda's healthcare management system, for instance, incorporates e-health initiatives such as Open MRS (an open source medical records system) and TracNET47 and Trac PLUS systems (to monitor infectious diseases). M-applications and services could also have far-reaching impact on the ability of the rural and poorer population to participate in the economy, as evidenced by m-banking services and m-payments (e.g. Kenya, Pakistan and the Philippines), and other initiatives in the areas of agriculture (e.g. "mAgri" in Senegal to help make agricultural value chain more efficient). One fifth of International Telecommunication Union (ITU) member countries have included broadband as part of universal access. Promoting infrastructure sharing, open access, and spectrum reframing are among those innovative regulatory measures to spur network development and extend access.

*Source:* ITU (2011), *Trends in telecommunication reform 2010/2011.*

## E. Institutional frameworks

26. The establishment of independent regulators – delinked from the formerly State-owned incumbents – has been an essential step in regulatory reform. By setting up independent regulator, governments signal their commitment to reduce market power of dominant firms. Independent regulators can be vested in various entities (ministry, autonomous agency) and cover one specific sector or multiple sectors. Independence must be real and effective with adequate financial and human resources. Transparency is

essential for independence. Multi-stakeholder consultation has been found conducive to greater transparency and credibility. Effective dispute settlement and appeal procedures are important for the accountability. The advent of various concession models has given rise to "regulation by contract".

**Box 6. Regulation by contract: Water services in Senegal**

In 1995, the public water utility in Senegal was divided in three entities. The State-owned SONES was in charge of water infrastructures under a concession contract; the privately owned SDE that signed an *affermage* contract for water supply; and a public entity, the ONAS, responsible for water treatment. The *affermage* contract linked the State, SONES and SDE for a period of 10 years. Another three-year contract set technical and financial performance targets for SDE which is paid on a double incentive formula. This earning formula was aimed at increasing the overall performance. Under the concession contract, SONES monitors SDE's performance for the State. For each contract, a monitoring committee is created to ensure their efficient implementation. By adapting the model to place emphasis on performance control and institutional backups, the approach proved to be successful in improving SDF's performance.

*Source:* Sophie Trémolet and Diane Binder. *La régulation des services d'eau et d'assainissement dans les PED*. 2010

27. ISS regulation often suffers from overlapping jurisdiction with competition authority. Conflict arises because policy objectives differ while both could have a jurisdiction on a given issue.[10] For instance, in telecommunications, technical decisions regarding spectrum use affect the intensity of competition. It is important that the responsibilities of each agency are unambiguously defined and cross-agency coordination mechanism established, so as to minimize the potential for "forum-shopping" and "double jeopardy". Typically, competitive segments may be left under the oversight of the general competition law while non-competitive segments can be left for sectoral regulators. It is also possible that one agency – general competition authority or sector regulator – deals with both (e.g. Australian Competition and Consumer Commission).

**Box 7. Competition in the electricity sector in Zimbabwe**

In Zimbabwe, the electricity supply was dominated by the Zimbabwe Electricity Supply Authority (ZESA). The reform process initiated by Electricity Act of 2002 established the Zimbabwe Electricity Regulatory Commission as a sectoral regulator, which was given the broad mandate of promoting competition and monitoring possible abuse of market power. The Competition Commission investigated a case of abuse of dominance in the electricity industry in 2003 upon a complaint, alleging that ZESA was abusing its market position, such as excessive pricing. The Competition Commission's intervention led to a consent agreement whereby ZESA would improve communication with consumers.

# IV. Financial services

28. The global crisis demonstrated the economic cost of regulatory failure in financial services. Crisis-related losses incurred by European banks between 2007 and 2010 are estimated to be €1 trillion (8 per cent of the EU GDP). Between 2008 and 2010, the EU approved €4.6 trillion (39 per cent) of State aid measures to financial institutions.[11] The global financial regulatory landscape is in the process of reshaping. New reconfiguration of

[10] UNCTAD (2009). TD/B/C.I/MEM.3/3.

[11] IMF (2010). *Global Financial Stability Report.*

the regulatory landscape will have important bearings on countries' abilities to regulate and on their engagement in international trade and trade agreements.

29. Regulatory reform efforts are pursued to extend the scope of supervision to include macroprudential as well as microprudential objectives. They are essentially aimed at internalizing negative externalities created by individual financial institutions. The ultimate goal is to restore the core function of the financial sector to support productive activities in the real economy. Specifically, these reform efforts aim to enhance capital basis to absolve losses, extend regulatory oversight to the weakly-regulated but increasingly significant "shadow banking system", enhance transparency in derivatives trading, and strengthen regulation on systemically significant financial institutions, financial consumer protection entity for consumer safety.

30. The central reform agenda is based on strengthening bank capital and liquidity standards ("Basel III"), under the Basel Committee on Banking Supervision (BCBS), to be introduced between 2013 and 2019. To improve the ability of banks to cover losses, Basel III seeks to improve the quality of the regulatory bank capital (e.g. common shares and retained earnings), and increase its amount to 7 per cent of risk-weighted assets by 2019, including a "capital conservation buffer" of 2.5 per cent to withstand future stress. To address pro-cyclical bias of bank risk-models and capital requirement, new rules require banks to increase capital buffers in good times to draw down in periods of stress ("counter-cyclical buffer").

31. National regulatory reform efforts continue, often going beyond international standards. In the United States, the "Dodd–Frank Wall Street Reform and Consumer Protection Act" adopted in 2010 was a major attempt to comprehensively and simultaneously reform the United States financial services while capital adequacy standards are yet to be finalized. The EU seeks to translate the Basel III framework through the proposed "Capital Requirement Directive IV (CRD IV)". The CRD IV proposals address all 8,300 banks operating in EU, not only internationally active banks as under Basel III. In the United Kingdom, the Independent Commission on Banking ("Vickers Commission") recommended that, going beyond Basel III, banks have a capital buffer of at least 10 per cent of domestic retail assets, and that the larger banks have a safety cushion of between 17-20 per cent of highest-quality assets.

32. A central issue in the reform agenda is whether and how to isolate essential banking services provided by deposit-taking retail/commercial banks from high-risk activities of capital market-based investment banks. Considered as one of the most far-reaching reform proposals, the "Volcker Rule" under the United States Dodd–Frank Act requires bank-holding companies to discontinue most forms of proprietary trading and investments in private equity and hedge funds, thereby encouraging *de facto* separation between the two business models. The EU's CRD IV also discourages banks' investment in private equity and hedge funds by assigning higher risk weights. The United Kingdom Vickers Commission recommended "ring-fencing" retails banking from investment banking, rather than total separation, by requiring that all retail banking by those banks engaged in investment banking be conducted by separate subsidiary with independent governance and its own extra capital.

**Box 8. Regulatory reform in India**[12]

India's financial regulations exemplify features of macroprudential regulation. In 2004, the Reserve Bank of India included financial stability in its objectives, bringing macroprudential regulation within its scope. In pursuit of financial stability, it has substantially extended the regulatory regime to include, among others, rules covering the management of exposures to risk, permission for new financial products (derivatives), regulatory capital requirements, shadow banking, securitization and OTC derivatives transactions. Reformed rules have been accompanied by strengthened guidelines for supervision, and of new institutional arrangements for the coordination of different sectoral regulators, most recently in the form the *Financial Stability and Sector Development Council*.

33. The regulatory reforms recently implemented focus on identifying and regulating global systematically important banks (G-SIBs) which, because of their size, often benefit from an implicit government guarantee. During the crisis, 18 large institutions accounted for half of the $1.8 trillion in losses reported worldwide. The annual subsidy implied by cheaper funding cost for a sample of global banks is estimated at $60 billion. [13] Two broad approaches are being used to address G-SIBs. The first consists of reducing the probability of failure by increasing their capital requirement. G-SIBs would be required to hold an additional capital requirement of 1–2.5 per cent of risk-weighted assets. The other is to mitigate the impact of failure on the financial system by introducing *ex ante* safe, rapid and effective "resolution" regimes, including on a cross-border scale. For developing countries, where large foreign banks often dominate the financial sector, prescribing a limit on the institution's share in the financial sector is seen as a viable option.

34. The proposed financial transaction taxes are expected to serve as a mechanism to improve prudential regulation by taxing excessive risk-taking. In the EU, there is a proposal to implement a financial transaction tax, to be levied at a rate of 0.1 per cent on all transactions, and 0.001 per cent of derivative contracts, between institutions when at least one party is based in the EU. This is expected to raise about $78 billion a year.

35. The interconnectedness of the financial services industry requires regulatory reform in non-banking financial services, notably the insurance services sector. Cross-sector regulatory harmonization is important for systemic prudential regulation of the sector as a whole. In Europe, the EC Directive (2009) on the taking-up and pursuit of insurance and reinsurance businesses ("Solvency II"), aims to create a single common framework for capital adequacy and risk management across the EU. The United States has commenced its own reforms such as the Solvency Modernization Initiative. At the international level, the International Association of Insurance Supervisors introduced follow-up measures on the Insurance Core Principles covering capital adequacy and enterprise risk management.

36. Economic costs and benefits of proposed measures feature prominently in the policy debate. A key concern of the financial industry is that new regulations may reduce banks' profitability by a third, increase borrowing costs and credit availability especially for small and medium-sized enterprises and slow economic growth. However, it is not certain that higher capital ratios will reduce profitability, and recent research also shows that, in several countries, smaller financial sectors would actually be growth promoting.[14] Moreover, likely

[12] UNCTAD, TD/B/C.I/MEM.3/9.
[13] UNCTAD, *Trade and Development Report* 2011.
[14] Admati A *et al.* (2010). "Fallacies, irrelevant facts, and myths in the discussion of capital regulation"; Arcand JL, Berkes E and Panizza U (2011). "Too Much Finance?"

costs of high capital requirement are expected to be offset by potential gains from lower probability of crises. A BCBS study estimates that a 2 per cent increase in capital ratios will reduce the probability of a financial crisis by 2.9 per cent. BCBS analysis finds the G-SIB framework should provide an annual benefit of 40–50 basis points of GDP, reflecting the reduced probability of a financial crisis.

37. Experiences suggests that the banks that were least affected by the crisis were those that stayed focused on traditional banking. The diversity of financial institutions cushions the system from disruptive forces of international financial markets. The role of State-owned banks, national development banks and community banks in providing indispensable productive investment is significant. In 2003, such banks accounted for 80 per cent of total assets in South Asia. The State-owned banks have proven resilience in compensating credit crunch, and promote competition in oligopolistic markets. Increasing the diversity of agencies involved in remittance transfers (e.g. postal, financial cooperatives and microfinance) could also reduce the cost of transfer.[15]

**Box 9. Financial integration in Brazil**

In the 1990s, the Government strengthened its innovative approach for supplying financial services through a system of "correspondent" banks supported by the postal network. Banking correspondents acting as agents for banks are responsible for financial transactions vis-à-vis customers. In this framework, Banco Postal (BP) – a special postal financial services bank provided by the Brazilian Post – acts as a correspondent for a private bank (Bradesco). The general principles of BP were established by the Brazilian Ministry of Communication, and reflected in the institution's social inclusion objectives. The objectives stipulated that priority be given to municipalities without a bank in order to provide them with a first access to financial services with specific timetable objectives (to serve at least 1,000 municipalities by the end of 2002). UNCTAD research shows that this policy contributed to promoting access to financial services in the most deprived areas.

*Source*: UNCTAD, *Services, trade and development,* 2011.

38. Bailouts of the financial sector have had major trade distortive effects. One question was how services liberalization should be pursued in the presence of such distortion. This is significant as the financial services are among the most liberalized, with 110 schedules containing commitments, particularly through Mode 3 (commercial presence). Countries where foreign banks have strong presence have attached importance to host country regulations, by requiring the establishment through a subsidiary, rather than direct branching, to ensure effective regulation of foreign banks. This is seen as warranted as roll-back of measures in financial sector, once liberalized, is particularly difficult.

**Box 10. The Russian Federation's WTO accession commitments in financial services**

A key contentious issue in the Russian Federation's accession negotiations was whether to allow branching of banks and insurance companies. Russian law prohibited foreign banks from opening branches, requiring them instead to incorporate as subsidiaries. Subsidiaries must be registered as Russian entities, have their own capital, appoint local boards of directors and are subject to supervision by the Russian Central Bank. In its final accession commitments, while it agreed to permit 100 per cent foreign ownership of banks, the country stood by its requirement for foreign banks to incorporate as subsidiaries.

39. Exceptional financial bailouts and financial regulatory reforms have highlighted the issue of whether the General Agreement on Trade in Services (GATS) provides sufficient

[15] UNCTAD, TD/B/C.I/EM.4/3.

flexibility for national regulation. Some have argued that the World Trade Organization (WTO) agreements provide full freedom for members to regulate financial services sectors, such as under "prudential carve-out" provisions. Others have submitted that, despite the "prudential carve out" clause, the fact that these measures need to be justified under an exceptional cause could be seen as an indication that the basic GATS rules need careful consideration.

40. Given the renewed interest in capital controls, potential implications of GATS disciplines for countries' ability to implement such controls have become a salient issue. The merit of the measures is increasingly recognized, including by the international Monetary Fund (IMF). Issue arises because certain GATS provisions generally prohibit restrictions on international transfers related to specific commitments. Furthermore, once a commitment of full market access is made for a specific service (e.g. deposit–taking through Mode 1 (cross-border supply)) for which capital movements are essential to the provision of the service, no capital control could be imposed. Whether or not capital control could be justified under financial prudential carve-outs is also an issue. Some argue that only prudential regulatory measures of the types recognized by the Basel processes (e.g. capital requirement) can be considered as prudential measures.

41. The advancement of specific regulatory reforms has also highlighted potential implication of GATS disciplines for those measures, particularly where liberalization commitments are made. For instance, some have held that the proposed financial transactions taxes may be seen as an indirect restriction on transfers and payments if it increases the transaction cost. Proposed *de facto* separation of commercial and investment banking might be relevant to GATS Article XVI (market access), prohibiting limitation on the size, legal entity or total number of financial service suppliers. This could also have implications for developing countries' ability to limit the bank's market share to address too-big-to-fail problem.

42. Commitments under the "Understanding on Commitments in Financial Services" entail deeper liberalization. Its "standstill obligations" provide that any limitations to the commitment should be limited to existing measures, which effectively lock in existing level of regulations and restrict the scope for future re-regulation. The obligation to allow for the provision of "new financial services" by any foreign suppliers established in the territory may run counter to the increased regulatory attention given to financial product safety. Such deeper obligations are also replicated in North–South regional trade agreements (RTAs) and WTO accession processes.

# V. Regulation of ISS and the international trading system

43. Trade liberalization under regional and multilateral trade agreements increasingly covers infrastructure services, as successive regulatory reforms have opened segments of such sectors to competition. Regulatory reform and competition are the forces behind recent liberalization in ISS. Trade liberalization in services essentially addresses "regulatory" measures, because whether, to what extent and how to allow international competition in domestic infrastructure services market is essentially a regulatory decision. Trade liberalization processes therefore intrinsically influence the design of domestic RIFs, hence the ability of government to regulate. The key challenge is to ensure adequate content, pace and sequencing of liberalization-cum-regulatory processes, so that effective RIFs and domestic capacity be built before privatization and liberalization.

44. The extent of trade openness differs across sectors, largely mirroring that of competition in domestic market. The "formal" openness as reflected in GATS commitments is high in telecommunication (with 108 countries having made commitment),

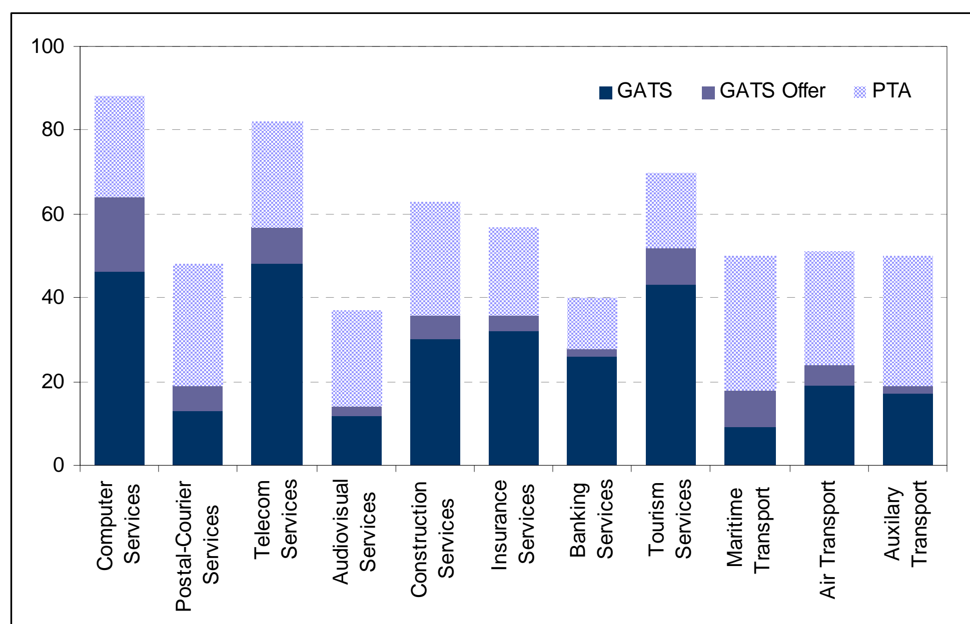
and low in the energy sector. Transport services may be situated in the middle with 38 countries in international maritime freight transport. In the Doha Round, some improvement is being proposed in the 71 initial offers and 31 revised offers regarding sectoral coverage, cross-border supply, licensing requirements, foreign equity participation, types of business and application of pro-competitive regulatory principles (e.g. the Reference Paper on basic telecommunication). Offers concerning energy services have been limited, inter alia, to services "incidental to" mining, energy distribution and pipeline transportation services. Nonetheless, the actual level of "openness" in these sectors is believed to be higher in reality.

45. Not all regulatory measures have the same trade-restrictive effect. Research by the Organization for Economic Cooperation and Development (OECD) suggests that public ownership, size and scope of public enterprises and price controls are less trade restrictive than discriminatory measures related to ownership limits, restrictions on operations of foreign firms, nationality and residency requirements for board members, barriers to competition (e.g. access to networks and interconnection) and transparency in licensing regime.[16] Any trade-restrictive effect, however, needs to be weighed against legitimate regulatory functions they may deliver in ensuring orderly competition and market development.

46. While multilateral negotiations are in a stalemate, trade liberalization efforts increasingly take place at the regional level. Services have become a major feature of today's RTAs that contain deeper "behind-the-border" commitments. While only five services RTAs had been notified to WTO before 2000, 85 additional agreements have been notified since then, with the result that most WTO members are members of at least one RTA containing services. Although two thirds of existing RTAs do not cover services, the majority of North–South RTAs do. Particularly significant of the recent initiatives is the proposed Trans–Pacific Partnership Agreement (TPP) among 10 Pacific Rim countries, which aims at "high-standard" commitments. Telecommunication and financial services figure prominently in North–South RTAs. TPP seeks to ensure "regulatory coherence" by requiring the establishment of a national coordinating body to monitor and review regulatory measures, including through impact assessment.

[16] http://www.oecd.org/dataoecd/7/9/43080529.pdf.

Figure 4
**Average index scores, by selected sector**




*Source:* Roy, Martine (2011). Services Commitments in Preferential Trade Agreements. WTO.

47. RTA commitments on services generally go beyond commitments made under the GATS and the Doha Round services offers. This is the case with both Modes 1 and 3 (reported in the WTO dataset). The extent of GATS+ commitments in RTAs is more important in developing countries than developed countries. This underscores the significance of RTAs in inducing services liberalization in developing countries. Advances in RTAs occur differently across sectors (figure 4). Some ISS that already registered a high degree of openness under GATS (computer and telecommunication) continue to see further liberalization under RTAs. Financial services (insurance and banking) exhibit a modest level of GATS and GATS+ regional commitments, with banking attracting a particularly low level of RTA commitments. Transport services (maritime, air and auxiliary) are subject to the lowest level of GATS commitments given the sector's sensitivity (e.g. cabotage in maritime transport) but see the largest GATS+ commitments under RTAs.

48. Key domestic regulatory instruments – licensing, qualification and technical standards – are specifically subject to multilateral rule–making on domestic regulation. A major thrust of the proposed disciplines is to reduce regulatory discretion by requiring that such measures should not be more trade restricting than necessary ("necessity test"). Concern exists that this may constrain regulators' ability to establish and modify regulations to address public policy objectives. For instance, the imposition of user fees on services suppliers to finance universal access might be found afoul of this test. Research suggests that the proposed concept of "pre-established" relating to measures might imply that a regulatory change that upsets foreign services suppliers' "reliance on existing law" could be found incompatible with GATS' requirement to maintain a "stable and predictable" framework.

49. Regulatory harmonization and mutual recognition could remove barriers arising from diverse technical standards, particularly transport, financial and related professional services where information asymmetry is significant. Such regulatory harmonization is

more feasible in a regional context. Although services integration is still at a burgeoning stage, South–South integration and cooperation is promising in this area, as they directly contribute to economies of scale and build productive capacities.

**Box 11. Regulatory cooperation in South-east Asia**

The Association of South-east Asian Nations (ASEAN) Telecommunications Regulators' Council is engaged in harmonizing and coordinating regulatory issues, such as competition, interconnection, licensing, and capacity–building and universal access. A joint cooperation programme seeks to expand broadband services and enhance universal access, and mutual recognition agreements, including on engineering services and software design. The Greater Mekong Subregion (GMS) Economic Cooperation Programme is aimed at developing road network in the region. A Cross-Border Transport Agreement Framework under the programme provides mutual recognition of drivers' licenses and visas for persons engaged in transport operations, and issues GMS road transport permits for road vehicles to be eligible for cross-border traffic.

50. Increased market opening of ISS under trade agreements has brought to the forefront the treatment of ISS that are considered as "public services" and may be excluded from liberalization commitments. The issue regarding the extent to which trade agreements provide for "public service" exemptions arises because many services that were considered as "public services" are now supplied competitively in a commercial market. Public services defined as "services supplied in the exercise of government authority" – "supplied neither on a commercial basis nor in competition" with other suppliers – are generally excluded from GATS and many RTAs. Many network ISS subject to State monopoly have been privatized and opened for competition in many countries. The nature of exemption is also unclear; whether the exemption applies to existing measures (i.e. standstill) or to existing and future measures. One view is that the exemption applies only to existing measures (e.g. State monopoly that existed at the time of GATS) with the implication that exemption may not apply to the ISS that are opened for competition.

51. Liberalization commitments are thus relevant to many ISS. They could limit the scope for future policy reversals, such as re-nationalization and re-regulation of market entry conditions. Different liberalization approaches – negative and positive lists – could have significantly different implications for regulations. Negative list approach by default assumes the removal of restrictions in all sectors unless reservation is explicitly listed. It requires detailed and careful scheduling of existing regulations that limits market access or national treatment, as any "omission" could result in liberalization. Such reservation is generally seen as "standstill" commitments, i.e. not allowing countries to decrease the conformity of the measure with respective obligations. This has a "ratchet effect" of liberalization In contrast, with the positive list approach, liberalization commitments only apply to sectors that countries decide to schedule, and subject to any limitation and conditions that are attached in the schedules. The approach allows more flexibility.

52. In sectors where full market access commitments are undertaken, countries cannot maintain restrictions on market access, which essentially pertains to regulatory measures to determine entry and ownership conditions, including public monopolies, exclusive service suppliers or economic needs tests, often used in the context of ISS. Full market access commitment also requires that the number of services suppliers is not limited. By generally prohibiting such entry and ownership requirements, market access obligations could constrain the use of such traditional regulatory instruments.

53. Furthermore, subsidies are important for the development of ISS in developing countries. While no disciplines exist under GATS on subsidies on trade in services, the manner in which subsidies may be granted is subject to national treatment requirement if a full national treatment commitment is made in a sector. Thus, a country may not

discriminate between foreign and domestic service supplier regarding subsidization. Many countries in practice have listed general exemptions for subsidies as limitations in their schedules. For instance, the EU listed in its schedule that the subsidization of a service within the public sector is not in breach of its commitment.

54. Various behind-the-border regulatory measures under existing North–South RTAs could also have a potential "regulatory chill" effect because regulators may be discouraged from introducing and modifying regulations for public policy goals due to concern over potential conflict. Provisions on investor protection against indirect expropriation and judicial reviews of regulatory decisions (i.e. investor–State dispute) could have such effect, and investor–State disputes often concern ISS.[17] In telecommunications, obligatory commitments on non-discriminatory access to basic telecommunication networks and communication platforms for value added services could lock in WTO reference paper on basic telecommunications.

# VI. Conclusion

55. ISS contribute significantly to national income, growth, employment and poverty reduction. Developing appropriate institutions, processes and resources to adequately regulate the provision of ISS is critical. Developing countries face challenges in building capacity to effectively regulate. Many regulatory bodies are understaffed while ISS regulations require high technical expertise. International cooperation is important in overcoming regulatory and institutional constraints.[18] The past three sessions of the Multi-year Expert Meeting on Services, Development and Trade: the Regulatory and Institutional Dimension have examined various country experiences, best practices and success stories in key ISS sectors. Such experiences indicate the diversity of approaches and provide a wealth of lessons to draw upon to analyse what has worked and what has not worked, to understand the scope of opportunities and the potential pitfalls. The followings are some broad lessons learned:

(a) Given the diversity of market participants, optimizing RIFs to address the diversity of suppliers is a major issue;

(b) RIFs need to be anchored in a comprehensive, integrated and coherent strategy for growth, development and trade, and closely coordinated with accompanying policies;

(c) RIFs need to be adapted to local realities and to rapidly evolving economic, social and technological contexts;

(d) A key objective is to compensate for market failures, and where viable, regulators need to promote competition as a means for achieving economically efficient outcomes;

(e) Where regulated companies are required to serve certain social objectives, those objectives should be clearly articulated and understood;

(f) Price should be set at a level that is fair and reasonable to promote competition, allows investors to recover costs, and ensures affordable services to consumers;

[17] Markus Krajewski (2011). "Public services in bilateral free trade agreements of the EU".
[18] UNCTAD survey of 66 authorities in ISS.

(g) Transparency and public participation are essential for the credibility and effectiveness of the regulatory process. Multi-stakeholder interaction is important;

(h) The independence of regulatory agencies to make decisions in their areas of jurisdiction significantly enhances the transparency and credibility;

(i) Privatization and liberalization of ISS need to be preceded by the establishment of sound RIFs and the acquisition of national capacities;

(j) Multilateral and regional trade agreements and liberalization processes needs to adequately factor in public policy goals pursued by RIFs;

(k) The Government needs to be equipped with sufficient institutional capacity and skills to regulate, monitor and enforce RIFs. Building human, regulatory and institutional capacities of regulators and policymakers in developing countries is critical;

(l) All forms of partnerships need to be leveraged for developing efficient RIFs. Enhanced trade and regulatory cooperation, particularly South–South context, need to be promoted;

(m) Further research, impact assessment and services policy reviews are needed to enhance understanding and identify best practices in building and implementing best-fit RIFs that can best deliver development gains.

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