SUMMARY

WORLD TELECOMMUNICATION DEVELOPMENT REPORT

Trade in Telecommunications
World Telecommunication Indicators

INTERNATIONAL TELECOMMUNICATION UNION

1996/97

The *1996/97 World Telecommunication Development Report* has been prepared by the ITU Telecommunication Development Bureau and the Strategic Planning Unit. However the views expressed in the report are those of the authors and do not necessarily reflect the opinions of the ITU or its Members. The report was coordinated by the principal authors Michael Minges and Tim Kelly. Other contributors were Laurent Besançon, Doreen Bogdan, Maria-Concetta Gasbarro, Ben Petrazzini, Liliana de Sá, Peter Stern and Nancy Sundberg. The report was edited by Colin R. Blackman (editor of *Telecommunications Policy*). Nathalie Delmas was responsible for production of the report. Additional assistance was provided by Linda O'Driscoll, Francine Maurice and Dalia Mendiluce. Joseph Velayos implemented the online version. The cover was designed by Stéphane Rollet. The cover picture was drawn by Gl Banu Altinok of Turkey.

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WORLD TELECOMMUNICATION DEVELOPMENT REPORT 1996/97

Trade in telecommunications

Executive summary

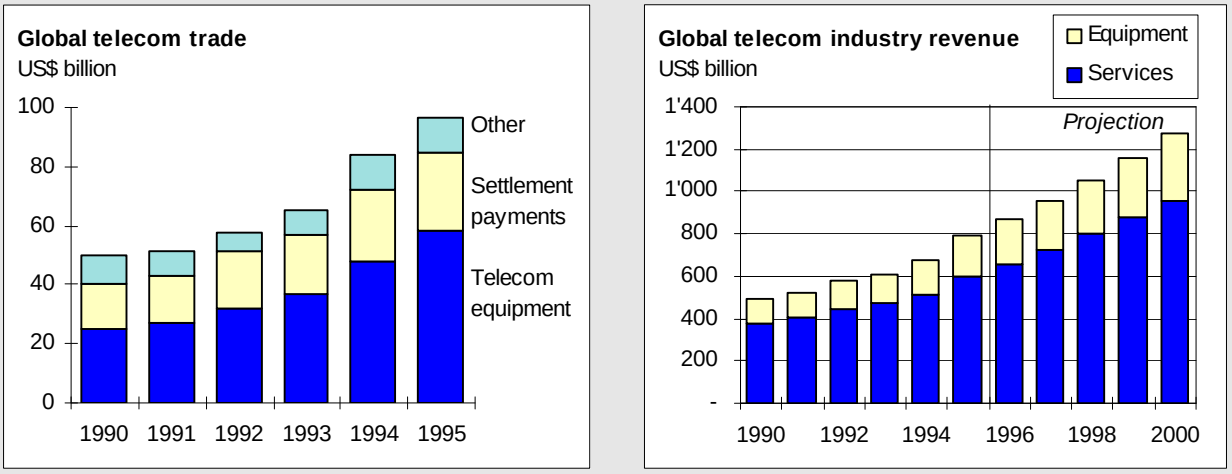
February 1997

INTERNATIONAL TELECOMMUNICATION UNION

What is trade in telecommunications, why does it matter and what are the benefits? The third edition of the ITU's *World Telecommunication Development Report* provides answers to these three questions. The report is timely because it coincides with the conclusion of the negotiations carried out at the World Trade Organization (WTO) by the Group on Basic Telecommunications. The agreement brings basic telecommunications into the framework of the General Agreement on Trade in Services (GATS). This is significant because it extends the coverage of the GATS to virtually all of the US$ 600 billion telecommunication service sector. Traditionally, international telecommunication services were traded under a system of bilateral agreements between nations. The WTO telecommunication agreement opens the way to a multilateral framework for freer trade, market opening and competition. This report tracks the evolution from an old regime of international telecommunications to a new regime of global competition. Bringing together data that has never before been published, the report quantifies the value of cross-border trade in telecommunications, estimated to have exceeded US$ 100 billion in 1996 (see Figure 1).

Figure 1: Telecommunications goes global

Trends in global telecommunication trade, 1990-95, and global sales of telecommunication equipment and services, 1990-2000



Note: The left chart shows the value of the telecommunication market traded internationally.
Telecom equipment exports cover product categories SITC 764.1, 764.3. 764.81 and 764.91.
Settlement payments show estimated payments made under the accounting rate system to terminate international telephone calls.
Other is an estimate of other types of telecommunication trade achieved, for instance, by foreign direct investment in privatizations, mobile ventures, Build/Transfer arrangements, licence awards, loans and aid, consultancy, mobile roaming, etc.
The right chart show the total value of the telecommunication market.

Source: ITU World Telecommunication Indicators Database, UN.

What is trade in telecommunications?

International trade in telecommunications can be defined as sales of telecommunication equipment or services that cross national borders. The import and export of telecommunication *equipment* conforms well to our traditional understanding of trade as buying and selling. Global exports of telecommunication equipment reached US$ 58 billion in 1995, an increase of more than 20 per cent above the previous year and a more than twofold rise since 1990. Exports now account for about one-third of the total telecommunication equipment market and that share continues to rise steadily. This boom has been largely driven by the growth in demand for telecommunication services which in turn is driving the construction and modernization of networks.

Until recently, opportunities for telecommunication *services* trade had been more limited than for equipment. Telecommunication service trade includes transactions that cross national borders, such as telephone calls or electronic mail sent from one country to another. It also covers foreign investment, such as the purchase of telephone companies by foreign investors or joint ventures between local and foreign partners to establish new telecommunication service companies. But what exactly is being bought and sold? One way of answering the question is to look at the ways by which services can be traded: cross-border supply, commercial presence, consumption abroad and movement of staff.

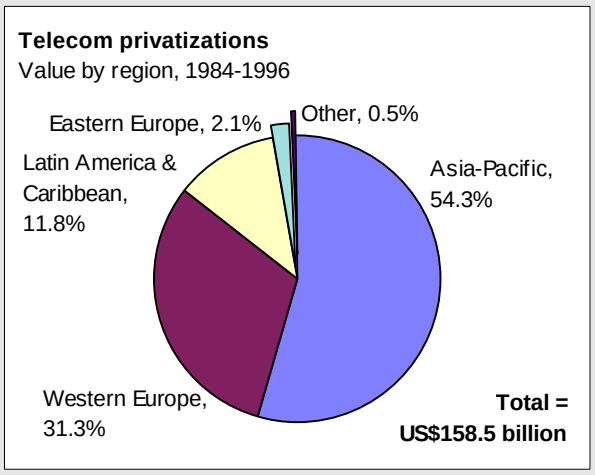
Of these four delivery methods, *cross-border* provision is by far the most important. International telephone calls have risen from under 4 billion minutes in 1975 to over 60 billion in 1995, a growth rate of 15 per cent a year. In 1995, international telephone calls generated US$ 53 billion in retail revenues which corresponds to 8.7 per cent of the global telecommunication service market.

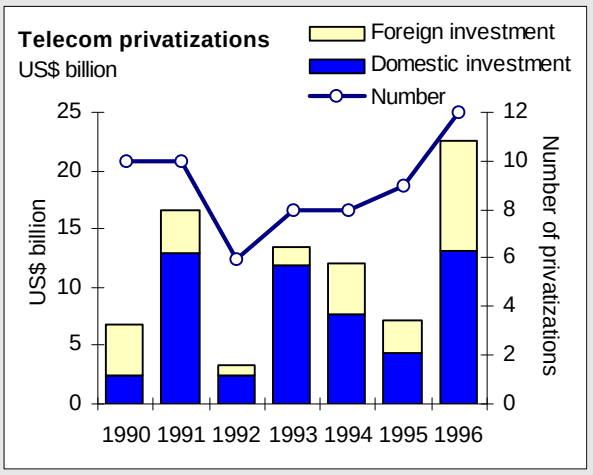
The second most important way in which telecommunication services are traded is through *foreign investment* to establish a commercial presence. Historically, opportunities for foreign investment in the telecommunication services sector have been limited by the fact that most countries had state-owned monopoly carriers. This era is now coming to an end. Since 1984, 44 Public Telecommunication Operators (PTOs) have been privatized raising US$ 159 billion (Figure 2). About one-third of this investment has come from outside the home country of the privatized operator. Foreign capital can be raised either though a share offering or, more often, through the sale of a minority share of a PTO to a strategic partner. As well as privatizations, there are an increasing number of opportunities for foreign investors to establish foreign subsidiaries or to combine with others in joint ventures. The mobile communication market has proved particularly fruitful as countries have licensed additional operators and introduced new services.

Finally, a small but growing part of telecommunication service trade is derived from either the *movement of customers* or the *movement of staff* outside their home country. While difficult to quantify, available evidence suggests this form of trade is already significant and growing fast. Examples include mobile roaming and telecommunication consulting activities.

Figure 2: Public Telecommunication Operators for sale

Value of privatizations of PTOs, by region, 1984-96 and over time, 1990-1996





Note: The left chart includes all PTO privatizations since 1984.
Source: ITU Telecommunication Privatization Database.

Why does telecommunication trade matter?

Trade in telecommunications matters for two main reasons. First, because the telecommunication industry is a significant and growing sector in its own right. In terms of market capitalization, the telecommunication industry ranks third in the world behind health care and banking, while telecommunication and office equipment was the fastest growing sector of merchandise exports during 1995. Second, because telecommunications plays an important role for other industries. Information, and the facilities for accessing, processing, and disseminating it in electronic form, have become a strategic resource as important as land, labour and capital. Thus telecommunications has a dual role as both a traded product and service and as a facilitator of trade in other products and services.

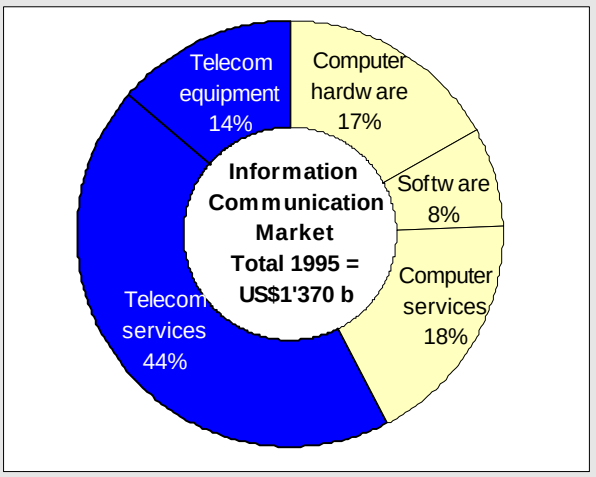
Looking first at telecommunications as an industry, the sector achieved combined sales of US$ 788 billion in 1995, of which three-quarters came from services and one quarter from equipment sales. The cyclical upturn that began in 1992 has continued and accelerated. During 1995, sales of telecommunication services grew, in real terms, by 7 per cent. There is little sign that this rate of growth is slowing down, with the telecommunication sector growing at twice the rate of the global economy (Figure 3).

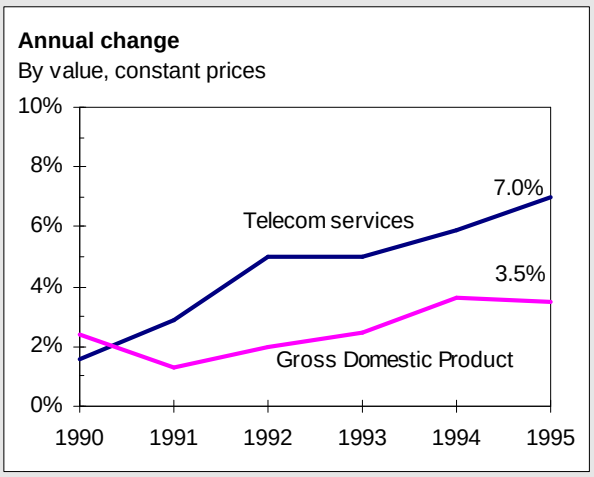
It is not hard to find the causes of this growth. During 1995, fixed line telephone networks added 45 million new lines worldwide (compared with 38 million during 1994). Equally, the mobile communications sector continued its rapid growth in 1995, adding 33 million new subscribers worldwide (19 million in 1994). If we extrapolate forward the trends of the past five years, it is likely that by 1998, the telecommunication sector will be a one trillion dollar industry worldwide; and, by the turn of the century, the combined base of fixed line and mobile telephones will be around one billion.

The industry is growing stronger as well as faster. In 1995, the average expenditure by telecommunication users rose by almost US$ 100 to US$ 905. Equally, the volume of international traffic which they generate rose by 5 per cent to 89 minutes each per year, providing a further boost to global trade and tourism. Furthermore, the telecommunication sector is at the heart of a much larger industry—information and communications, or *info-communications*—worth some US$ 1'370 billion in 1995. The convergence of the telecommunications sector with the computer and broadcasting worlds is creating new synergy, most evident in the growth of the Internet, which continues to double in size every year. At the start of 1997, there were more than 16 million host computers connected to the Internet and more than 50 million users. The significance of the Internet lies not so much in what it is, but what it could become. It can be regarded as the prototype of a global information infrastructure which will lay the platform for the electronic commerce of the 21st century.

Figure 3: Rolling along nicely

Information-communications market, by value, 1995, and annual change in global telecommunication services sales and GDP, 1990-95





Note: In the right chart, annual change is shown in constant prices.
Source: ITU, European Information Technology Observatory, International Monetary Fund.

Who benefits from telecommunication trade liberalization?

So to the third question: what are the benefits of trade liberalization? Freer trade in telecommunications promises to deliver at least three economic gains: new and improved products and services, lower prices and additional investment. Open trade in telecommunication services should result in more competition, lowering prices for most businesses and for many consumers and providing both with a choice of different service providers.

Probably the clearest evidence comes from the market segment where competition is currently the most keen: in international telephone services. Those markets where direct competition is permitted have achieved higher rates of growth than countries that have retained a monopoly. For developed economies, this difference is significant; competition has raised the growth rate of traffic per subscriber from 5.6 per cent to 9.3 per cent per year since 1990. However, for emerging markets the difference is much more striking: over the same period competitive markets grew their international traffic per subscriber by 11.7 per cent per year compared with just 5.2 per cent per year in monopoly markets. This suggests that the potential benefits of trade liberalization might actually be *greater* for emerging markets than for developed ones.

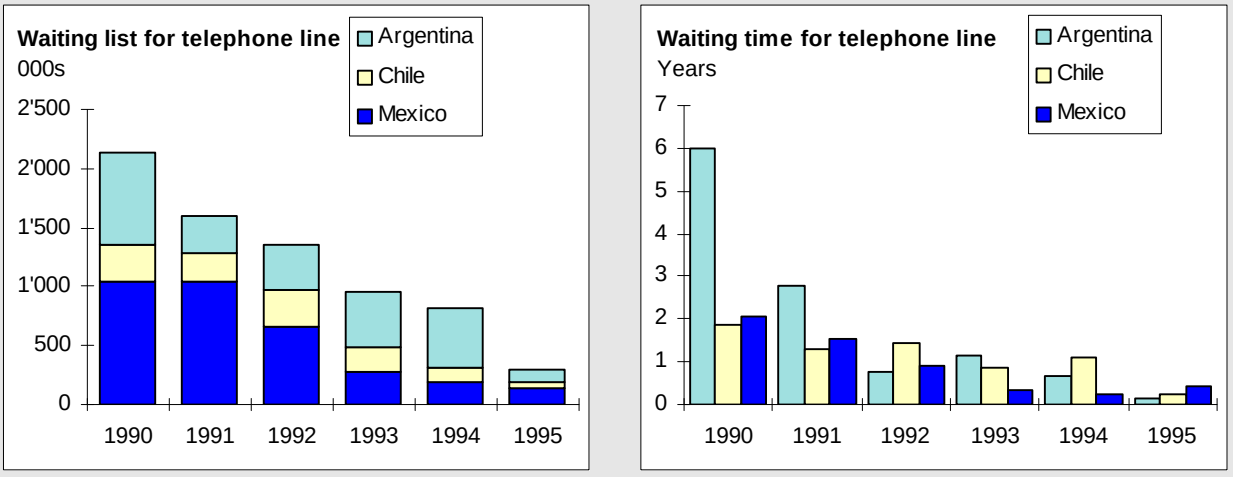
Why should this be so? One part of the answer is because of unmet demand. Some 43 million people are on registered waiting lists for telephone connection in emerging markets and the average waiting time is more than a year. By introducing new investment in the market, waiting lists can be sharply reduced, as has been the case in developing markets that have privatized their public telecommunication operators at the start of the 1990s (see Figure 4).

What about the potential costs of trade liberalization? Some governments are afraid that they will lose the ability to control entry and ownership in their domestic markets. The truth is that, at the international level, governments have practically lost the power to dictate who can provide services. For example, the development of alternative calling procedures such as call-back has occurred at a much faster rate than had been expected over the past few years. As a result, almost all markets are now open to some degree of competition.

By making commitments to open their market, governments are merely acknowledging what is already happening. In particular, it is necessary to reflect on the changing role of government, from being a direct player in telecommunications to a policy maker and regulator. Even though their direct operational influence may be greatly diminished, there will be more work for governments to do under a competitive market environment than was the case under monopoly service provision. That is because existing market players as well as potential new entrants will be looking for clear guidance on what sort of regime will be established for issues such as interconnection, numbering, universal service obligations and tariff policy.

Figure 4: No more waiting

Waiting list and waiting time for telephone line, for privatized operators in Argentina, Chile and Mexico, 1990-95



Note: Argentina, Chile and Mexico sold shares in the national telecommunication operators to strategic foreign investors in 1990. The right chart is calculated by dividing the waiting list by the number of main lines added during the year.

Source: ITU World Telecommunication Indicators Database.

Towards a multilateral trade framework

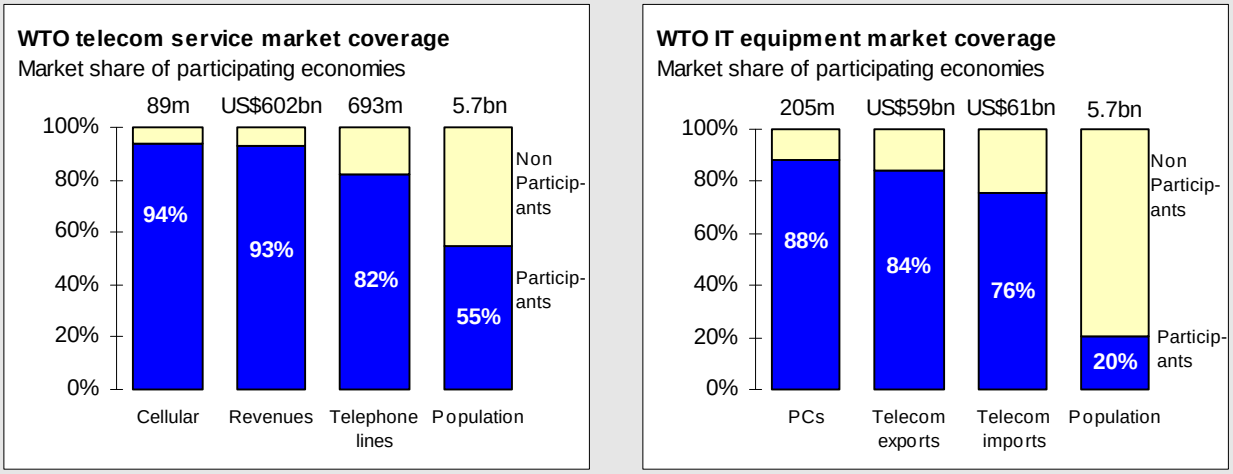
A new paradigm is emerging for international trade in telecommunications. The old paradigm, which might be loosely described as "inter-national" telecommunications, was based on bilateral relations between countries. The monopoly operators in those countries collaborated in the joint provision of international services. This model is now breaking down, not so much because the system is not working, but rather because it now fails to capture the full picture. A new pattern based on global competition is emerging. It recognizes that trade in telecommunication equipment and services now takes place in a multilateral environment in which the majority of trade relationships include multiple intermediaries between buyer and seller. We are moving from a world of one-to-one relations to a world of many-to-many. It is not nations that trade with other nations, but companies and individuals that conduct trade with each other.

What will be the impact of the market opening moves agreed at the World Trade Organization? The agreements are significant for two main reasons. First, because the countries which have made offers or commitments account for such a large part of the total world market. The 69 governments that made offers under the negotiations on basic telecommunications services (Geneva, 15 February 1997) constitute some 94 per cent of the global market for telecommunication services (see Figure 5). Similarly, the 28 governments that signed the Ministerial Declaration on Information Technology products (Singapore, December 13 1996) account for 84 per cent of global telecommunication equipment exports. Second, because the agreements have been negotiated as part of a multilateral treaty, the offers and commitments are binding on governments and practically irreversible.

For many telecommunication users, the transition to a multilateral trading system will bring benefits in terms of greater choice and lower prices. For the majority of carriers, there will be significant benefits in terms of creating new market opportunities and a more level playing field. The goal is to extend the multilateral solution in which all countries move forward together and in which all benefit, not just those carriers with market power. Only then will the benefits of global competition be extended to all the world's inhabitants.

Figure 5: Achieving critical mass

Market share of economies participating in WTO telecommunication negotiations



Note: The left chart shows the share of the global market accounted for by the economies which have made commitments in the WTO negotiations on basic telecommunications. The right chart shows the share of the global market accounted for by the economies which have signed the Ministerial Declaration on exports of Information Technology products.

Source: ITU World Telecommunication Indicators Database, WTO.

Table 1: Key indicators for the world telecommunication service sector

US$ millions	*1990*	*1991*	*1992*	*1993*	*1994*	*1995*	*1996[e]*
Telecom service revenue	377'200	404'600	447'100	470'200	511'500	601'500	*670'000*
Real annual change[1]	1.6%	2.9%	5.0%	5.0%	5.9%	7.0%	
-Telephone service revenue[2]	329'300	348'100	367'400	373'300	391'100	441'800	*472'000*
—International telephone service revenue[3]	42'600	46'800	50'800	52'200	54'100	62'800	*69'000*
-Mobile service revenue	14'100	19'100	26'700	35'900	49'400	82'500	*118'000*
-Other revenue[4]	33'800	37'400	53'000	61'000	71'000	77'200	*80'000*
Investment[5]	114'600	123'500	131'300	134'900	139'300	151'500	*160'000*
Millions							
Telephone lines	519'383	545'140	573'621	605'909	647'470	692'955	*745'000*
Mobile cellular subscribers	11'194	16'180	23'210	34'182	55'352	88'339	*135'000*
International telephone traffic minutes	33'326	37'888	43'332	48'877	55'754	61'778	*68'000*

Note: All data in millions of current US$ converted by annual average exchange rates. [e] Preliminary estimates. [1] In 1995 exchange rates and prices. [2] Revenue from installation, subscription and call charges for fixed telephone service. [3] Per accounting method used by country (i.e. retail, gross or net). [4] Including leased circuits, data communications, telex, telegraph and other telecom-related revenue. [5] Capital expenditure on telecommunication equipment. This figure is underestimated due to the growing number of new market entrants that are not always reflected in national statistics.

Source: ITU World Telecommunication Indicators Database.

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