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The basic regulatory equation: the foundation for competition

This chapter focuses on the importance of the creation of a competitive telecommunications marketplace through the regulatory process. It specifically examines the basic regulatory equation for achieving competition in the global telecommunications market and why competition is such an important goal for all governments in structuring a regulatory regime for their telecommunications market. This chapter further builds on earlier discussions of the concepts of privatization, liberalization, effective regulation, and deregulation. The conclusion examines three case studies in different world regimes where the goal of a competitive telecommunications market is being achieved and through which governments are able to satisfy many of the subsidiary goals that make a competitive telecommunications sector attractive.

2.1 The basic regulatory equation

As discussed, there is a basic regulatory equation that has led and will continue to lead to the successful creation of a competitive marketplace:

$$\text{Privatization} + \text{Liberalization} + \text{Effective Regulation} = \text{Competition}$$

There is also a possible fourth component of the equation that was not previously discussed: deregulation. However, deregulation is rarely a factor in this formula until the specific telecommunications market has matured to a very advanced state of competition and even then, deregulation generally only occurs in limited sectors of the market.¹ This concept is briefly addressed later in this chapter as well as throughout this book.

As discussed below, each of the basic regulatory equation's components must be achieved if a truly competitive telecommunications market is to be created and sustained. Concrete examples of markets not able to reap the many subsidiary benefits of competition abound, because of a government's failure to implement a specific component either fully or in a meaningful manner.² Accordingly, allowing partial competition in a sector of the telecommunications market or in the market itself, while preferable to a market devoid of competition, is still not an effective means of achieving the benefits that competition can bring into an economy or society. Therefore, each component of the basic regulatory equation must be met in order to achieve the benefits of a competitive telecommunications market.

2.2 Why competition?

2.2.1 A brief chronology

Initially, as discussed further in Chapter 3, competition was not the goal of most governments in developing and fostering their telecommunications markets. On the contrary, as with most essential services, including railroads, gas, and electricity, governments believed early on that in order to provide reliable telecommunications services to the greatest number of their citizens, it was essential that telecommunications service providers

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1. Many countries will only deregulate a telecommunications sector where there is little potential for abuse by the service provider. For example, one common area that is deregulated receives only very small aperture earth stations. This service requires minimum regulatory scrutiny because the receive-only nature of the communications service eliminates concerns of interference with other radio-based services and limits potential for abuse by users.
 2. For example, in late 2000, the government of Poland planned to auction competitive mobile telephony licenses. However, in part because of the lack of an effective regulatory regime, only three applicants submitted notices of intent to bid for the five concessions. In response, the government decided to call off the auctions and offer the three concessions through a straight paper process.

be awarded essentially monopoly status for their entire country market.³ Similarly, many governments did not want to entrust the provision of an essential service, such as telecommunications, to private operators.⁴ Accordingly, most governments established government-owned and government-operated monopoly service providers in the formative years of the telecommunications sector. It would take decades, at least until the early 1980s, for the concept of a private entity providing basic facilities-based telecommunications service, or more than one entity providing these services, to become a possibility in the minds of even the more progressive and reform-minded government leaders.⁵ As discussed below, the United States was the leader in this movement, with other markets, such as the United Kingdom and Chile, following closely behind.

There are several reasons that the United States was the first market to allow competition in its telecommunications market. First, its own virtual

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3. The United States also took this view in the early stages of the development of its telecommunications market. In the early 1900s, at the start of the telecommunications revolution, there were a multitude of telecommunications service providers operating in the United States. However, AT&T was able to gain control of the marketplace through its holding of essential patents on voice transmissions and later patents on long-distance communications technologies. By leveraging these advantages, AT&T was able to provide superior long-distance service to its affiliates and was able to essentially force independent operators to shut down. The United States government would not challenge this *de facto* monopoly for many years, although it did recognize the potential for anticompetitive behavior by such a dominant service provider. Partly in response to this potential, the Communications Act of 1934 was enacted. The Act provides that its purpose is “[to] make available, so far as possible, to all people of the United States, a rapid, efficient, nationwide and worldwide wire and radio communications service with adequate facilities and reasonable charges.” 47 U.S.C. § 151.
 4. Because of the critical nature of telecommunications services to the well-being of a nation, many governments remain hesitant to entrust these services to anyone but a government-owned and government-operated entity. For example, in many countries the incumbent government-owned monopoly service provider is responsible for providing both civilian and military communications applications. Accordingly, in these countries, it may be expensive (e.g., to build a redundant network) and politically difficult to create a separation of the telecommunications service provider function solely for critical government uses, or the government may be hesitant to allow a private entity to control these communications. Other countries, such as some Middle East nations, may view government ownership and control of the communications network as necessary because of the government goal of controlling its populations’ communications through monitoring and other means.
 5. The opening of value-added services, such as facsimile and voice mail, began slightly before this time frame.

monopoly, AT&T, was privately owned and operated. The fact that there was already a separation between the service provider and the government in the United States meant that the U.S. government did not have a direct financial interest in the service provider that faces most other governments. This allowed the United States to by-pass the very difficult hurdle of privatizing its incumbent service provider in creating a competitive telecommunications market. Second, and of perhaps greater importance, the United States had established an independent and effective regulator in 1934 when it created the Federal Communications Commission (FCC)⁶. Although, as discussed below, the FCC did not always follow a procompetition bent in its rulings,⁷ its political independence and its separation from the service provider allowed it to grapple with these issues in a generally fair manner and adapt to court decisions that mandated market opening.⁸ Third, and of equal importance, is the concept of entrepreneurship, which is firmly rooted in the American culture. Accordingly, because American entrepreneurs saw how lucrative the telecommunications industry was, they continually made costly legal and business challenges to the AT&T monopoly, even when such challenges appeared futile, in an effort to gain a piece of the large economic pie that AT&T had virtually controlled.

The first major challenge to the monopoly model of telecommunications services provision in the United States was by a small company called Microwave Communications, Inc. (MCI).⁹ Beginning in 1959, the FCC

6. The U.S. Congress created the FCC in 1934 through the Communications Act of 1934. 47 U.S.C. § 154 et seq. (1934).

7. In fact, AT&T created a strategy under Theodore Veil of “One Policy, One System, Universal Service” (basing this strategy on the control of technology giving AT&T certain advantages), which helped improve AT&T’s relationship with the FCC. Specifically, the universal service aspect of this policy gave AT&T a special relationship with regulators that led to a regulatory compact in the early 1900s, which helped AT&T and its Bell operating companies to ultimately become the dominant service provider of basic telecommunications services in the United States by being willing to meet the increased service coverage requirements sought by the U.S. government.

8. The FCC’s primary mandate is to serve the public interest, convenience, and necessity. 47 U.S.C. § 154 (1934).

9. There were several less-obvious attempts even earlier. One of the most notable of these was the Hush-A-Phone case. In this case, AT&T alleged that a company that had manufactured and sold a simple attachment to the customer handset had violated its monopoly on the telecommunications network. The FCC agreed with AT&T. Ultimately, the courts heard this case and the FCC’s decision was reversed. *Hush-A-Phone Corp. v. U.S.*, 238 F.2d 266 (D.C. Cir. 1956).

allowed private companies to use microwave technology to haul their own private long-distance communications. Until this time, not even private companies could operate their own networks; they had to rely on the AT&T network almost exclusively. In 1964, MCI applied to the FCC for authorization to construct and operate a microwave network to carry other private companies' long-distance traffic between two United States cities. MCI subsequently sought FCC authority to carry all types of long-distance traffic and to interconnect with AT&T's network using this network [1]. The FCC initially determined that these activities should not be authorized on the ground that it was not in the public interest. MCI subsequently appealed the decision to a federal court, which overturned the FCC's decision and ordered the FCC to issue to MCI an authorization to provide a full range of interstate services and interconnect with AT&T's public switched network. This was a major step in opening the door to telecommunications competition in the United States.

With some competition in the long-distance industry now authorized, AT&T began to engage in what the U.S. government would come to view as anticompetitive practices in order to protect its existing market share. In response, in 1974, the U.S. Department of Justice (DoJ) filed an antitrust suit against AT&T to halt its anticompetitive practices. In 1982, AT&T and the DoJ negotiated a consent decree to settle this antitrust suit. This decision became known as the Modified Final Judgment (MFJ) and resulted in AT&T divesting itself of its 22 local phone companies [2]. This left AT&T as (in terms of its service arm) primarily a domestic and long-distance service provider. The divested companies were specifically prohibited until the late 1990s (pursuant to the Telecommunications Act of 1996) to provide long-distance services, as well as from entering certain other lines of business.

Because of these developments, the U.S. long-distance market transformed from a market of fledging competitors overshadowed by a single dominant service provider to a market characterized by a declining market share for AT&T (but, as is often the case with monopolies that become competitive, with increasing revenues) and significant growth opportunities for competitors. As a result, today U.S. consumers (both business and residential) have a wide choice of long-distance service providers available to them at competitive prices. More recently, in the past few years, competition has begun to blossom in the U.S. local services market as well.

Shortly after the United States began to open its long-distance and other telecommunications service markets to competition, other coun-

tries also began to take steps in this direction. One of the first and most successful was the United Kingdom. However, unlike the United States, competition in the United Kingdom was not primarily an industry-led endeavor but a cornerstone of the then-Thatcher government's reform plan. In 1981, the United Kingdom, pursuant to the newly enacted British Telecommunications Act of 1981, separated the telecommunications functions of its monopoly service provider from its postal entity, creating British Telecommunications and an independent regulator [3]. The law also expressly authorized facilities-based and resale competition to British Telecommunications. Shortly thereafter, in response to the newly enacted law in 1982, Mercury was issued the first competitive facilities-based authorization in the United Kingdom. During this period, the United Kingdom began reducing its ownership in British Telecommunications, ultimately eliminating government ownership [4].

The subsidiary goals of the United Kingdom process were twofold: to encourage the telecommunications service sector and to reverse the decline of British technological leadership, primarily in the equipment market [5]. While the process did not fulfill the second goal, the first goal was fully met. Today, the United Kingdom has vibrant competition in the telecommunications service sector. This result has benefited British Telecommunications, which had to adapt to a competitive market in order to survive and is now more profitable than ever;¹⁰ business consumers, who have been able to take advantage of low international and other service rates; and many of the new entrant service providers, which have been able to capture valuable market share.¹¹ In addition, residential consumers in general have benefited, because of the increase in build-out of the telecommunications infrastructure, generally lower rates, the increased choice in service providers, and the technological innovation that the new competition has propelled.

Other key country markets soon followed, mostly pursuing the United Kingdom's first goal—to encourage the telecommunications service sector—but often having subsidiary goals, such as improving the overall health of the economy by attracting new business and providing improved access to the telecommunications network. Most notably, the

10. By March 2001, British Telecommunications had completed \$28,930.8 million in business.

11. For example, the United Kingdom has one of the most advanced mobile service markets in the world and was one of the first countries to auction spectrum for advanced mobile service operations.

European Union, capitalizing on the success of the U.K. market, began its own plans to allow competition in the entire European Union. The first major in-road was the 1987 Green Paper, which initiated a series of legislative actions in the European Union to open the telecommunications market and to harmonize the regulatory frameworks of EU member states [6].

Subsequently, in its 1988 Action Plan, the EU Commission set forth the EU's liberalization plans, including the opening of the telecommunications terminal market and unrestricted recognition of type approval for terminal equipment; the progressive opening of the telecommunications services market to competition; the separation of the regulatory and operational activities of the incumbent monopoly services providers; the establishment of conditions ensuring open access to network and services; and application of the EU's competition rules to the telecommunications sector [6]. The European Union implemented its action plan over the next decade through EU Commission directives and other EU rulings. Subsequently, almost all EU member states were required to bring their own telecommunications markets in line with the European Union requirements by 1998.

Other regions of the world also followed suit. Chile was one of the early market openers in South America. Specifically, in the early 1990s, in response to the changing political regime in Chile, the government began to permit competition in many of its key sectoral markets, including in its telecommunications market. The Chilean telecommunications sector was the first to be privatized in South America and is one of the most liberal telecommunications markets in South America. Specifically, the Chilean government finalized the privatization process in 1989 when it completed the sale of all state-owned telecommunications companies, including the two dominant service providers, *Compañía de Teléfonos de Chile* (CTC, domestic service) and *Empresa Nacional de Telecomunicaciones* (ENTEL, long-distance service). Today, all service providers in Chile are privately owned. The Chilean telecommunications sector is completely open to investment by local Chilean and foreign companies. An independent regulator, the Undersecretariat of Telecommunications (SUBTEL), is the primary authority for supervising and regulating all telecommunications services.¹²

12. SUBTEL is responsible for issuing all franchises, licenses, and concessions for services; establishing technical standards for equipment; supervising the country's operating companies; and developing national and international telecommunications policies. SUBTEL also has responsibility for the allocation of radio frequencies.

Further, today the effects of competition can also be seen in many global markets. For example, as of July 2000, more than 2,800 companies were authorized to build international telephone networks. In 1997, that number was less than 600. It has been estimated that in some markets, such as Germany and Hong Kong, new entrants were able to gain over a third of international minutes in just 1 year's time [7].

However, as discussed, competition is still only beginning in many developing countries—many of these markets are still either completely closed, such as Vietnam, Jamaica, and Iran, or allow only limited amounts of managed competition, such as Egypt or the United Arab Emirates. As discussed further below, because of the lack of competition in these markets, they are plagued with poor infrastructures, high rates for service, and generally limited access to the network in most rural and remote regions. Further, other sectoral industrial players are often hesitant to enter these markets, since they will not be able to have reliable communications. If businesses do enter these markets, they may seek to have their communications services provided by alternative, and sometimes illegal or “gray,” methods. In the most closed of these markets, it can be estimated that it may take as long as a decade until the concept of competition is introduced in a meaningful manner.

2.2.2 Influences

In order to understand why competition is today the desired result of most governments in regulating their telecommunications markets, one must comprehend the influences that have helped shape this goal. There are numerous influences that have assisted in leading to this result, with the key ones including the needs of the business community, technological innovations, government needs, societal needs, and international pressure. Below is a brief discussion of how each of these influences have led governments to seek competition in their telecommunications market.

2.2.3 The needs of the business community

Perhaps one of the biggest influences in creating competition in the telecommunications market is the effort of the business community. There are two main constituent business groups active in telecommunications. First, the most prominent and outspoken group is the service providers, who wish to enter a new market or who are already operating in a market. The second, less vocal, equally important, group is the business consumers of telecommunications services.

Both constituent groups will often make the government well aware of their needs through advocacy either on a stand-alone basis or together in larger “industry groups.” For example, many service providers and business customers participate in local chambers of commerce. Often, these constituencies, even if competitors, have similar goals and can effectively lobby a single position as a mass group, thus leveraging numbers to garner more political support and clout.

Service providers

Competitive service providers recognize that competition is good business. Specifically, these companies recognize that in order to succeed, a level playing field must exist for all providers. Such goals are pursued by start-ups, such as Global Crossing, as well as by former telecommunications monopolies, such as Deutsche Telekom. Accordingly, most efforts by these providers are aimed at the government adopting the basic regulatory formula. Across the board, competitive service providers recognize that often the incumbents become stronger companies by becoming more efficient, more innovative, quicker to market, and more responsive to their customers. These interests of service providers will be discussed in greater detail in subsequent chapters.

Business consumers

More and more companies are operating on a global basis, with physical locations in many countries and their customer reach extending to almost any place on earth. As companies continue to expand their reach, reliable telecommunications services are often an important key to these companies’ success. Accordingly, companies often will consider telecommunications services, in terms of access, price, and reliability, in determining where to locate their international offices and which markets to engage in e-commerce. Countries may lose out on business opportunities if their telecommunications infrastructure and market availability are not consistent with the high-end standards that these companies are seeking.

In addition, business customers are seeking high-quality, high-bandwidth services around the world. No longer are businesses willing to have segmented networks. On the contrary, businesses expect to have the ability to have access to a global network with the same level and quality of service whether they are operating in Calcutta, New York, or Seoul. To this end, business customers often demand end-to-end management of global,

voice, data, and Internet services with a single point of contact through a global service provider.

Accordingly, to capture these goals, business consumers often will seek to locate their business operations in countries where there is a competitive telecommunications market. This enables them to obtain the following goals: the largest choice of service providers; lower prices; an improved infrastructure; and access to reliable, innovative, and efficient telecommunications services.

2.2.4 Technological innovations

Another key influence on the creation of a competitive telecommunications market is emerging technology. New technologies and applications are shrinking the globe and eliminating borders. These technologies, such as the Internet and advanced mobile telephony applications, allow consumers greater access to communications and often require greater bandwidth than traditional wireline telephony.

As more Internet use and applications are developed, the demand for additional bandwidth will continue to place tremendous pressure on existing networks that are already overutilized and undersized. For example, in 2000, as some Internet service providers began to upgrade their international backbone connections from 155 Mbps to 2.5 Gbps, there was a tripling or even quadrupling of bandwidth on many international routes [8]. Similarly, the increased capacity put a strain on existing domestic infrastructures.

Another huge impact on traffic flows is the increase in mobile use.¹³ Traffic flows will continue to increase exponentially as third-generation mobile telephony technology is deployed.¹⁴ Once again, this increased use puts tremendous pressure on existing telecommunications networks.

Accordingly, existing telecommunications infrastructure is often insufficient to handle these new demands on capacity. Governments must actively seek new ways to meet their growing infrastructure requirements or face missing out on the ability to capture the benefits of the information age for their citizens and as a revenue provider. Competition is often

13. For example, in 1999, approximately 11.5% of international calls were placed from mobile telephones [8].

14. Third-generation mobile service is the next generation of advanced wireless telecommunications systems. These systems will offer higher data speeds and increased capacity to support fixed and mobile service on wireless devices, including small pocket terminals, handheld telephones, and laptop computers.

the only way to ensure that there are sufficient resources available in a marketplace to meet these demands.

2.2.5 Government needs

Many governments have also recently recognized that they cannot operate in a vacuum; they must open their markets to international competition in order to be successful both in terms of bringing in new or retaining current business, as well as in order to provide needed telecommunications services to their citizens.

Despite these needs, many governments are also often faced with similarly strong political pressure to retain the status quo. This may be caused by many factors, including national pride stemming from the national service provider, many monopoly service providers are large employers, monopoly providers are often a cash cow for the government, and the government is hesitant to allow foreign investors into its market for the provision of what is seen as an essential service. Furthermore, many of the world's duopoly markets have a socialist political philosophy, at least in part. This may make implementing the components of competition, such as privatization, politically difficult and at odds with the basic tenets of the country's political structure. Accordingly, governments often have to engage in a balancing act in the timing and process for opening their telecommunications markets to competition in order to have the political support that is necessary for a successful market opening.¹⁵

2.2.6 Societal needs

Consumers are often underrepresented in the formation of telecommunications regulation. Although many governing laws for telecommunications regulatory schemes state that a goal of the law is to serve the public interest, it is often an unclear goal in terms of achievement, in large part because of the monies required to meet this goal. Accordingly, governments often have to grapple with how to best achieve this goal.

In general, consumers have several major concerns, which include access to services, rate levels, the ability to receive service, and the quality of services. Many citizens do not even have access to make a basic phone call, much less have the ability to access new technologies. Furthermore, often the cost of telecommunications services is prohibitive to a large portion of a country's citizenry. Of equal importance is that telecommunica-

15. This balancing process must also take into account the specific form of legal regime.

tions services are often unreliable. For example, in areas of Eastern Europe, such as Romania, portions of the existing infrastructure of incumbent service providers are so old and decrepit that in severe rainstorms outages occur for days on end. While governments are often aware of these situations, traditionally they have lacked the political power from consumers that is needed to react; this situation may be a lower political priority than reacting, for example, to the more vocal military or public health requirements. This prioritization is beginning to change as more and more countries are beginning to adopt the American form of citizen advocacy and as populations have become more sophisticated about communications choices.

In the United States, consumers are generally represented through the lobbying efforts of public interest groups, such as the Consumer Federation of America. As competition enters more and more markets, similar consumer advocate groups are also beginning to blossom around the world. For example, in Brussels, the seat of the EU, there are often visits to lobby the EU on behalf of consumer groups from both member states and nonmember states. Another important voice consumers have is through the voting booth. In the 1990s and 2000, quite a few candidates for high offices around the world have included telecommunications reform as an important plank of their campaigns. For example, in Romania, an issue in the 2000 presidential campaign included the prices for telecommunications services, which had risen dramatically since the privatization of the incumbent service provider, Romtelecomm.

2.2.7 International pressure

A very important influence on the creation of competitive markets is international pressure. International pressure can take varying forms—from that imposed by formal international agreements and treaties to pressure exerted by international organizations and informal pressure by other governments.

Perhaps the largest most recent influence has been the adoption of the World Trade Organization's Agreement on Basic Telecommunications (WTO Agreement), which became effective on February 5, 1998 [9]. As discussed, the WTO Agreement sets the broad framework for the creation of a competitive market in telecommunications services through a trade in service treaty. The WTO Agreement currently includes commitments from over 72 member states, covering a majority of the global telecommunications service market. These commitments cover market access and

TABLE 2.1 Overview of WTO Offers

REGION	COMMENT
Europe	Generally significant
Latin America	Somewhat positive
Asia & Africa	Varies widely
Non-WTO	Key markets include Russia, Vietnam, and Saudi Arabia

national treatment, foreign investment, and dispute settlement. Many member states also signed on the Reference Paper, which provides for key regulatory principles to which the member states will abide. In addition, the WTO Agreement contains a formal dispute settlement mechanism.

Although the WTO Agreement created a very good framework for market opening, it is far from perfect. There are many market realities associated with the WTO Agreement. First, as detailed in Table 2.1, although many countries committed to grant market access, the dates and terms of these commitments vary. Many other countries, although members of the WTO, have made no commitments. These countries, however, are able to reap the benefits of the other commitments without committing to anything more than the basic WTO principle of national treatment. Further, many key markets, including India and Saudi Arabia, are not members of the WTO. Accordingly, the battle for market access and the creation of a competitive telecommunications market is still on a country-by-country basis, although the WTO Agreement does provide market openers important leverage in countries where there are meaningful commitments.

Another major international pressure point was the European Union's decision to open its telecommunications market to competition in 1998. Specifically, as discussed earlier, the EU mandated that most of its member states must implement a competitive telecommunications regime by 1998. Once the European Union began its liberalization process in earnest, other Western European countries began to follow suit and, recently, many Eastern European countries that are seeking to gain entry into the European Union as member states have begun to implement EU directives. In many respects, the movement by the EU laid the groundwork for the successful conclusion of the WTO Agreement.

Other important groups include the International Telecommunication Union's Telecommunications Sector and the Organization for Economic and Cooperative Development, as well as regional groups such as

the Inter-American Telecommunications Commission and Asia Pacific Telecommunications group. In these forums, policy discussions are regularly held on competition and how best to liberalize, privatize, and regulate telecommunications markets. Originally, many of these organizations were not very sophisticated in regard to these issues, primarily because government-owned monopolies controlled the course of the meetings. As more and more governments open their markets to competition, and as the private sector players increase their active participation in these organizations, these antiquated viewpoints will no longer control the course of the policy discussions. Over the next several years, one can expect greater activities in this area that directly impact the formulation of telecommunications regulatory regimes.

2.2.8 Subsidiary goals

The primary reason that governments create a competitive telecommunications market is to obtain their subsidiary goals. Subsidiary goals commonly fall into two classes: direct and indirect goals. Direct goals are those where there is a linear relation to the creation of competition. Such goals can include achieving lower prices for consumers, creating greater consumer choice in terms of service providers and services available, the introduction of innovative technologies, and increasing the flexibility of service offerings.

These direct goals are almost universally recognized when a market becomes competitive. For example, reduced rates for services have been widespread. In Western Europe alone, the rates for international calls have dropped up to 90% in as little as 2 years [7].

Indirect goals, on the other hand, are those goals that do not directly flow from the creation of a competitive telecommunications market. These goals can include attracting new business or attempting to retain old business in nontelecommunications fields, such as banking, through the creation of a modern and reliable telecommunications infrastructure, providing increased services to the public in terms of health or education through the introduction of tele-medicine and tele-education, and encouraging the development of the high-technology sector.

As discussed below, subsidiary goals are often the driving force behind liberalization and privatization processes. In fact, many modern telecommunications laws specifically provide that the goals of telecommunications regulation are exactly these subsidiary goals. For example,

Venezuela's recently enacted telecommunications law provides for the following [10]:

1. To defend the interests of users, assuring their right to access to the telecommunications services in appropriate quality conditions and to protect, upon rendering such services, the effectiveness of the constitutional rights, especially those regarding respect for honor, privacy, secrecy in communications, and protection to the youth and the children. To that end, obligations may be imposed on the operators of the services in order to assure such rights.
2. To promote and help the exercise of the people's right to establish means of community sound broadcasting and open television system of public service in order for the exercise of a free and plural communication.
3. To procure competition conditions among the service operators.
4. To promote the development and use of new services, networks, and technologies, when available, and access to them in equal conditions of persons and further the geographic integration of space and the economic and social cohesion.
5. To further the efficient integration of telecommunications services.
6. To promote the research, development, and transfer of telecommunications technology, as well as training and employment in the area.
7. To render possible the efficient, effective, and undisturbed use of the limited telecommunications resources, such as the numeration and the radio spectrum, as well as the appropriate protection of the latter.
8. To incorporate and assure compliance with the obligations of universal service, quality, and standard minimum coverage goals and the obligations related to security and defense regarding telecommunications.
9. To favor the harmonious development of the telecommunications systems in the geographical space according to the law.

10. To favor development of the regional integration mechanisms to which the Republic is a party and promote the participation of the country in international telecommunications agencies.
11. To promote national and international investment for the modernization and development of the telecommunications sector.

Therefore, the goals of Venezuela in creating a competitive telecommunications market expressly include the creation of competition in the telecommunications market, as well as creating new services, increasing the level of technology, ensuring universal service, and other similar goals.

2.3 Privatization

Often the first step toward the creation of a competitive telecommunications market is the privatization of the incumbent government-owned and -operated monopoly service provider. However, this is often a very difficult first step for governments to take. For many governments the monopoly service provider is a cash cow and a bloated bureaucracy. In addition, it provides the government with direct control over the telecommunications network. Accordingly, it is difficult for governments from both a political and economic viewpoint to surrender this important source of revenue and jobs. However, governments that either delay the privatization process or do not proceed with it because of concerns over these issues are shortsighted and will likely be negatively impacted in future development in the telecommunications sector, as well as in other industries. This approach neglects to take into account that an influx of capital and expertise can be brought in through the effective privatization of the incumbent provider. As discussed below, this can lead to an improved telecommunications infrastructure and the introduction of innovative services to consumers.

Further, there are many other benefits that can be captured through the privatization process for governments, including, but not limited to, the introduction of lower rates through improved efficiency in operations and better customer service. This also includes laying the basis for a more competitive telecommunications market to be developed through the additions of liberalization and effective regulation.

One of the most financially attractive draws of the privatization process is the direct economic contributions that may flow into the national

treasury by investors. This money may be allocated by the government to assist in the development of other sectors or to achieve other government goals, such as improving medical care or building highways.

Another financial benefit is the attraction of foreign capital to improve the existing telecommunications infrastructure. The government may also be able to obtain significant commitments from the investor in terms of build-out of infrastructure or the provision of new services. Such services would often not be provided if the incumbent service provider did not receive an infusion of capital. Further, through privatization the incumbent provider may be able to obtain expertise in the technical, marketing, and other areas in which the incumbent provider is lacking.

In addition, if the ultimate goal of the government in its telecommunications market is the creation of a competitive market, even in a limited form, it is imperative that the government remove itself from ownership and operation of the incumbent service provider. If the government retains an ownership interest, except perhaps in the most limited form,¹⁶ it will have the incentive (or there will be the appearance of the ability) to discriminate in favor of the incumbent service provider in the market. Accordingly, privatization is an essential element to the creation of a competitive market and to ensure that the additional components of the basic regulatory equation, liberalization and deregulation, are also met.

2.3.1 Different forms of privatization

As discussed in more detail later, the form of privatization of the incumbent telecommunications service providers that a country takes may be different in each market. Specifically, the major forms include public stock offerings, direct investment in the incumbent service provider, and the formation of a joint venture.

The most common form of privatization of the incumbent telecommunications provider is the government sale of a strategic and controlling share of the incumbent monopoly service provider. This process is generally done through an auction process. This auction process will usually take one of two forms. First, it may be a straight auction process, where the contestants must meet minimum qualifications to participate, and, once they meet those, the auction will be determined based on the monetary level of the bid. A second type of auction is one that is not based

16. For example, some governments retain a small golden share in the incumbent service provider.

solely on money but also takes into account commitments that the investor is willing to make if it wins the auction. These commitments can include such things as investment in infrastructure, build-out, and the like. Another possible process is a beauty contest. In a beauty contest, each applicant will submit information on its qualifications as well as what commitments it is willing to make if it is the chosen investor.

Both the beauty contest and the combined auction/beauty contest approaches are fairly subjective and may lead to allegations of bias in the process, depending upon the result. Many governments use this rationale for pursuing a straightforward financial auction. These governments are then able to recognize the larger monetary rewards that generally accompany this approach, even though there is a cost in terms of achieving some of their subsidiary goals.

By using any of these processes, there may be limits imposed on the strategic investor. One of the most common forms of limits is that on foreign investment. Another limit is often the amount of ownership that the investor may hold in the service provider as a whole. Often, the government will only privatize a portion of the service provider and will hold the remaining share, which will later be released in the stock market or otherwise sold off.

Limited ownership rarely provides investors with the same incentives to invest resources. Further, this form of privatization may not always permit the investor to obtain management control. Without management control, there may be difficulties in achieving many of the benefits that typically accompany privatizations, such as innovative management, the introduction of new services, and increased investment, among other things.

2.3.2 The status of the privatization process

Most of the major markets around the globe have privatized their incumbent service providers. For example, all of Western Europe, almost all of the Americas, and significant markets of Eastern Europe and Asia have gone through the privatization process. Africa, however, still needs to make great strides in this area.¹⁷ There are also other key markets where privatization has yet to occur. These tend to include countries that still have fairly closed economies, such as Thailand, Saudi Arabia, and China,

17. Only a handful of African nations have even partially privatized their incumbent service providers. These include Ghana and South Africa.

or countries where many of the inhabitants are employed by the telecommunications sector, such as Costa Rica.¹⁸ In addition, since the telecommunications market became more glutted with opportunities, some countries, such as Ecuador, have held off on moving forward with the privatization process until they feel that they can recognize an appropriate value for their service provider. It can be anticipated that in the next decade all but a few stragglers will have completed the full or partial privatization of their government-owned and government-operated incumbent service providers.

2.4 Liberalization

Liberalization in its most basic form is the creation of actual competition in a specific sector of the telecommunications market, such that new entrants are allowed unfettered entry. The most dramatic effects of liberalization began to occur in 1998, as discussed below, the year the EU liberalization effort was implemented fully and the year the WTO Agreement on Basic Telecommunications Services came into effect. However, certain markets still refuse to surrender to the growing trend of liberalization. A market characterized by a single company operating as a monopoly is often seen as easier to “regulate” by the government than where there are numerous companies operating in multiple market segments characterized by direct competition. Despite these holdouts, many experts believe that most markets will succumb to the pressure to liberalize their telecommunications market in the next few years.

2.4.1 The components of a successful liberalization process

There are at least four basic components that are key to the success of the liberalization process. These are as follows:

1. The government must instill confidence in the potential service providers so that they will want to enter the market. In order to achieve this, a clear set of licensing rules and procedures must be issued. This will allow entities wishing to obtain authorizations to understand how the process works and with what requirements they are required to comply.

18. Since Costa Rica does not have a military, many of its citizens find employment with the incumbent monopoly telecommunications service providers.

2. The process that is established must be fair and transparent. Accordingly, applicants must understand the process for going forward, whether it be an auction, beauty contest, straight application, or a combination, and a reasoned decision, based on existing law and regulation, must be provided for any actions.
3. Licensing rules must be clear. Applicants must be aware of what is required of them to obtain and retain a regulatory authorization.
4. An appeals process that ultimately allows access to the judiciary should be established so that an applicant that is rejected or receives an authorization with conditions that it believes are unwarranted may seek redress from a neutral third party. Further, this appeals process must allow access to aggrieved parties from subsequent regulatory action or inaction.

2.4.2 Liberalization may be phased in

Telecommunications liberalization is a new phenomenon in many countries. Accordingly, in many instances, the liberalization process often takes place in phases. Governments may structure their markets to open only limited services, such as Internet or e-mail to competition, or introduce new services, such as mobile services, on a competitive basis, while retaining the existing monopoly of limited amount of competition for more traditional services.¹⁹

As discussed, often governments will utilize a limited form of market access as a test to see how competition works or does not work in their telecommunications market.²⁰ For example, many governments only initially allow competition in the value-added telecommunications sector for services such as Internet, high-speed data, and private voice networks. This approach serves several interests. First, it provides businesses with access to new service providers for many of the applications about which they are

19. Argentina is a case in point. Until November 2000, it only allowed competition in its domestic services market.

20. In the United States, for example, the FCC, as early as the 1970s, began fostering a competitive market for enhanced or value-added services. See *Regulations and Policy Problems Presented by the Interdependence of Computer and Communications Services and Facilities*. 28 F.C.C. 2d 291 (1970) (tentative decision); 28 F.C.C. 2d 267 (1971) (final decision), *aff'd in part sub nom; GTE Service Corp. v FCC*, 474 F.2d 724 (2d Cir 1972), *aff'd by order* 40 FCC 2d 293 (1973).

most concerned. This may allow the government to retain existing business or attract new businesses to the market. Second, introducing only limited competition allows the government to continue to benefit from either its incumbent government-owned basic service provider or leverage off of the privatization process by providing an exclusive period of time for the provision of basic services. In the case of a government-owned monopoly, the government will be able to continue to recognize the revenue associated with that operation. In terms of the exclusivity for a privatized basic service provider, the government will either be able to meet its commitment to the investors or possibly even obtain new commitments by keeping new competition at bay for a longer period of time. While this approach may bring certain immediate benefits, over the long term, as markets such as Singapore have recognized,²¹ limited forms of competition often stifle the realization of longer-term goals, such as attracting new businesses, achieving lower rates, and increasing service penetration levels.

Another manner in which competition may be limited is through the imposition of strict foreign ownership requirements. Many countries, at least initially, only allow a limited form of foreign ownership in new entrants. Accordingly, foreign investors must team with local service providers and other investors in order to obtain a regulatory authorization. Often, this will result in less new entrants than in a market where 100% foreign ownership is allowed, since limited investment may mean limited control of the operating entity (this, as discussed subsequently, will depend in part on the structure of the entity). Limited control will often dissuade investment. However, many governments, as discussed earlier, are hesitant to give control of what is still seen as a strategically important resource to foreign entities. Often, this hesitancy is politically motivated. Nonetheless, it is likely that as the world becomes increasingly global with the need for increased capital in order to meet infrastructure requirements, we will see foreign investment limits on telecommunications licenses further diminish.

21. Singapore originally was planning to have a duopoly market for basic telecommunications services for a set period of time. However, at the time that the duopoly was to begin, the Singapore government recognized that failure to initiate full competition would lead to the loss of a tremendous opportunity to attract and retain businesses in other sectors. Accordingly, the Singapore government, much to the surprise of global service providers, fully opened its doors to competition instead of limited competition.

2.4.3 The effectiveness of the liberalization process

The effectiveness of the liberalization process can be impacted by many factors, including timing, the shape of the economy, the acceptance of competition by the citizenry, and the government's commitment to liberalization. In most countries, however, it is the government's commitment to liberalization that has the most direct impact on the success of the process.

A brief overview of the world demonstrates that many countries have successfully liberalized their telecommunications markets. For example, the United States, most of the EU member states, and Australia have successfully fully liberalized their markets. Many other countries, such as the larger economies of South America (including Argentina and Venezuela) and some key Asian economies (such as Japan and Hong Kong) are well on their way. Most of these countries have been able to leverage the political will necessary to liberalize their telecommunications markets.

Despite these successes, there are many other markets, such as South Africa and South Korea (where the liberalization process is underway), where a successful liberalization process is not assured. Often, this is because of an unclear process and the failure of the government to institute an effective regulatory regime. This latter point will be discussed below.

Many other markets have not begun the liberalization process or have only made tiny inroads. These markets include the countries of sub-Saharan Africa, Saudi Arabia, the United Arab Emirates, Egypt, Thailand, and Vietnam, among many others. In these cases, as we will explore throughout this book, the government has not had the political will to move forward fully or at all with the liberalization effort.

2.4.4 The result

Institution of a successful liberalization process has led to three major results: the emergence of global service providers, dramatic price cuts, and new service offerings and improved infrastructure. These results will be discussed below.

The emergence of global service providers

A key result of the liberalization process has been the emergence of global service providers. Initially, service providers were constrained by regulation to operate solely or primarily in their home markets. However, as new opportunities opened up through the liberalization and privatization

processes, the larger, well-financed service providers, such as AT&T, British Telecommunications, and Telefonica, were able to move into new markets outside of their home markets as service providers. In this capacity, these providers are able to capture synergies of their international operations, often choosing to initiate operations in markets where their largest customers are or where the most international traffic from their originating country terminates.

An interesting note is that at least in terms of the international long-distance market, it appears that markets that liberalized more recently, such as Germany, are seeing more dramatic increases in competition than in markets, such as the United States or the United Kingdom, that liberalized that market substantially earlier. For example, as discussed earlier, the United States introduced competition in the international long-distance market in the early 1980s. As of 1995, AT&T still held a substantial percentage of market share. Germany, on the other hand, introduced competition in 1998 and as early as 1 year later, its incumbent's market share had fallen to almost half and is continuing to decline. This dramatic difference may be traced to the emergence of global service providers in the mid to late 1990s that operate on a multinational or global basis and already have the experience to be successful in newly competitive markets. These service providers include WorldCom, Inc., Telefonica, Teleglobe, World Access, and Global One. This is in contrast to the markets that were among the first to open to competition, where the new entrants were primarily start-ups with little or no experience in telecommunications or in entering new markets.

Global service providers hold a number of advantages over other new entrants in establishing themselves in new telecommunications markets. First, they tend to have access to significant amounts of cash. Second, they are able to leverage their existing skills, technology, networks, resources (such as marketing) in all the countries in which they operate. Third, many global service providers provide services to global customers. Accordingly, they are able to leverage these customers' global presence as they enter new markets. Another significant advantage these companies have is that they have proven themselves as successful service providers. Therefore, governments are likely to put stock in their track records, and new customers are less likely to question their ability to provide the services they promise in the new market. As more and more markets liberalize, we can expect to see an increase in the number and the impact of the global service providers.

Dramatic price cuts

Another direct result of liberalization has been dramatic price cuts for consumers. In some markets, the direct result of liberalization of the market has been the entry by service providers that are willing to operate at a loss or near thereto in order to gain market share. In this regard, it is important to note that there may be no way to make up the loss of revenue, because demand has not necessarily kept pace with price reductions. For example, in Germany, prices in some routes have dropped upwards of 90%, but call volumes only grew by 45% [11].

An important issue that this raises is how the incumbent service provider responds. If the incumbent reduces its prices, its business case protections may fall off and, hence, its profitability. However, if it fails to react, losing customers may similarly disadvantage it. Regulation may assist in curbing the behavior of the incumbent in these situations, so that competitors are not harmed in their efforts to enter the market and consumers benefit in the long run.

Additionally, price cuts may begin because of increased efficiencies in operations. For example, the introduction of competition may mean that global service providers are able to reduce costs through the introduction of regional networks (such as in Eastern Europe) or countrywide networks. Further, new entrants may be able to use newer, cheaper technology than what previously existed in the market. This may allow the competitive services to be priced lower than previously existed in the market. Another cost savings may come from the ability to build new infrastructure, which was previously the domain of the incumbent service provider. Global Crossing has been extremely successful in this arena, by building modern and reliable transoceanic cables.

New service offerings and improved infrastructure

Another area that benefits from market liberalization is the introduction of new service offerings and improved infrastructure. It is important to remember that in a regime with only one service provider, it is often difficult for that provider to be able to offer all types of services. Accordingly, the incumbent service provider, during its phase as a monopoly or near-monopoly, will concentrate on basic telecommunications services, such as local and long-distance services. Such a focus will often lead them to fail to adequately provide new services, such as Frame Relay or Asynchronous Transfer Mode, or build out their infrastructure adequately to meet increased demand for service.

The introduction of a liberalized market will often stimulate the introduction of novel services. Many new entrants will attempt to focus on sectors of the telecommunications market that were previously not provided, either adequately or at all. Furthermore, many of these new services will also require an improved infrastructure. New service customers, or the business customers of the global service providers, will often find the existing reliability and capacity of the incumbent's network unsatisfactory. Accordingly, a focus of many new entrants will include improving the existing infrastructure of the liberalizing telecommunications market.

2.5 An effective regulatory regime

In order to ensure that competition is able to flourish in the telecommunications marketplace, it is imperative that a viable regulatory framework be established. At a minimum, this framework must include:

- ◆ A fair and objective licensing process;
- ◆ Access to scarce resources, such as spectrum and rights of way;
- ◆ Effective regulations (requiring an independent regulator willing to enforce its regulations in a meaningful manner);²²
- ◆ Transparency in processes;
- ◆ Competitive (including dominant service provider) safeguards, including nondiscriminatory, cost-based interconnection;
- ◆ Unbundled network elements and access to rights of way.

These factors will be discussed in further detail throughout this book. Below we focus on the political realities of establishing this type of regime.

It is quite often politically difficult for an effective regulatory regime to be established. First, it takes political will to isolate the regulatory structure from political considerations. Further, the incumbent service provider, which still may retain strong ties to the government, may work against the creation of such a structure, since it is likely to be the target of

22. An independent regulator makes decisions based on expert judgment without undue influence from the executive or legislative branches.

most of the burdensome and stringent regulations. In fact, in many markets the dominant incumbent service provider argues that it should be protected from the competition through greater market access or pricing flexibility, as opposed to the other way around. For example, when PanTel applied in 1999 to build a nationwide Internet protocol network in Hungary, the incumbent, MATAV, made an objection to the government based on the fact that the technology was untried. The government ruled in MATAV's favor.

It is likely that investment in new technology is being slowed by the lack of independent regulators around the world, including in Eastern Europe. The shortage of mechanisms for dealing with issues such as universal service, interconnection, service provider selection, number portability, and unbundled network access may well deter foreign and domestic investors.

A key part of effective regulation is diligence on the part of the regulator to make sure that new service providers are not blocked from being able to compete in relevant markets. Regulators need to ensure open access to and use of other service facilities, among other things. The EU has been quite proactive in this effort by remaining vigilant over the status of its liberalization process. For example, the EU issues regular reports on the implementation and harmonization of telecommunications directives, performs studies on areas of improvement to the regulatory process, and continues to develop new legislation to address changing technologies and the like. Similarly, Anatel, the Brazilian regulator, has been quite active in enforcing its regulations.

Further, the regulator must also address and ensure that public interest is served in competitive telecommunications markets. The regulator must implement rules and policies to ensure that multiple service providers can interconnect with each other, that they do not engage in illegal price gouging, and that incumbents make available essential network elements. Further, the regulator must be able to act independently and perform its duties in a fair and transparent manner in order to sustain industry and consumer confidence in its actions, which is imperative.

It is important to note, as explored further in this book, that there is not one set formula for structuring an effective regulatory framework. For example, in the United Kingdom, primary enforcement is not from day-to-day regulation, but control of the authorized service provider is through the conditions in its authorization. Disputes over the regulator's interpretation and enforcement of a particular license may be referred to

the appropriate government authorities. This is different from regimes, such as the United States, where the regulator, the FCC, obtains its primary enforcement authority from the Communications Act of 1934 and its regulations, not from its licensing authority. Accordingly, oversight by the FCC occurs primarily through day-to-day regulation.

However, while there may not be a single successful form for creating an effective regulatory regime, competition in a marketplace will not exist in a meaningful manner without truly effective regulations. Many examples of this abound. For instance, in Mexico, failure of the Mexican government to constrain the anticompetitive behavior of Telmex, the incumbent service provider, has seriously impeded the ability of new competitors to capture market share in the Mexican telecommunications market. Further, many resources that could be invested in building out improved infrastructure and introducing new services instead have been utilized in court cases and lobbying in an effort to have effective regulation of Telmex.

2.6 Deregulation: a hidden component

One of the most interesting dynamics as competition comes into the marketplace is the need for more, not less, regulation. Hence, it is a misnomer when liberalization and deregulation are used interchangeably. As Figure 2.1 shows, deregulation generally only occurs once a competitive market has been firmly established, and the opportunity for anticompetitive abuses has been limited.²³ This is a rare instance and currently tends to happen only in limited market sectors.

An important concept to understand when speaking of deregulation is that once deregulation occurs, there is no effective method in which to curtail anticompetitive abuses or ensure that a level playing field for service providers exists. In addition, the ability to protect consumers from abuses in the market is often limited. Accordingly, many governments are

23. An interesting exception to this general rule was the case of New Zealand. Initially, New Zealand fully liberalized its market and even took the bold step of not establishing a regulator. The government instead left the antitrust commission with the ability to police potential anticompetitive abuses. However, since Telecom New Zealand remained dominant, without any real regulatory constraints, it was able to dominate the marketplace, hence hindering the development of a truly competitive market.

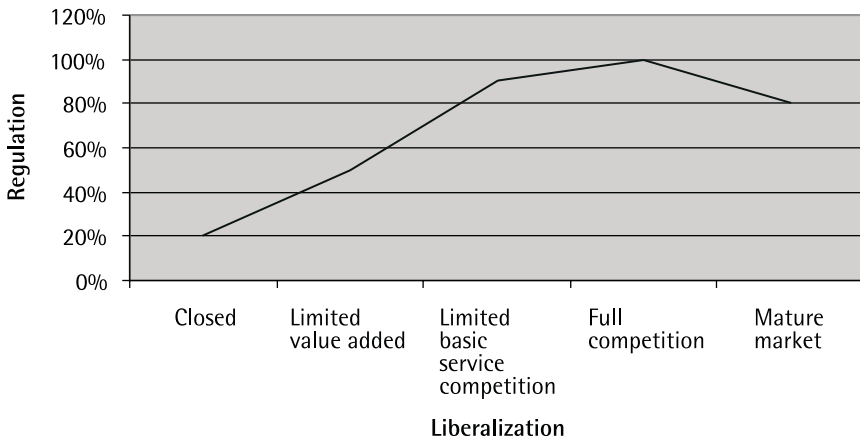


Figure 2.1 Deregulation chart.

hesitant to allow deregulation at a point that is too early in the liberalization process.

2.7 The result: recent case studies

2.7.1 Switzerland: a non-EU country that has adopted EU-like telecommunications regulations

Switzerland has traditionally been a country that has resisted entry into the European Union in an effort to retain its autonomy (although Switzerland is an EFTA member). However, in the 1990s it suffered economic stagnation and began to look for ways to improve the economy. One key method for achieving this was the passage of its 1998 Telecommunications Law, which supplemented the establishment in 1992 of an independent regulator for telecommunications. Specifically, the 1998 law resulted in the following key events:

- ◆ Splitting the telecommunications from the postal function of the Swiss postal and telecommunications entity;
- ◆ Setting the groundwork for the privatization of Swisscom (the former monopoly telephone company);
- ◆ Expanding the role of the regulator;

- ◆ Introducing competition into the Swiss telecommunications market [12].

The 1998 law is very similar to the laws passed in the EU. Further, subsequent actions of the Swiss legislature and the regulator have resulted in a regulatory regime, which, for the most part, mirrors the implementation of liberalization efforts in the EU. In this manner, Switzerland has been able to become a key market for telecommunications. Following Switzerland's lead, other EFTA nations have also moved forward with EU-type liberalization efforts.

2.7.2 Brazil: a market on the move

Brazil is the fifth largest country in the world and has the fifth largest telecommunications industry. For years, however, the constitutional, legal, and policy limits prohibited most private sector participation in the telecommunications market. However, recent reforms of the 1990s in the telecommunications sector, including the amendment of the constitution, the passage of new laws, the establishment of an independent regulatory authority, and the privatization of the incumbent government-controlled monopoly telephony companies, have attracted private investment, from both Brazilian and foreign enterprises, and are transforming the Brazilian telecommunications market into one truly based on competition.

The modern history of the Brazilian telecommunications sector started in 1972, when the government created, through the consolidation of local telephone operations, a virtual monopoly service provider through the creation of *Telecomunicacoes Brasileiras S.A. (Telebras)*, which was controlled by the government. A subsidiary of Telebras was also formed, *Empresa Brasileira de Telecomunicacoes S.A. (Embratel)*, to provide domestic and international long-distance services, among other services.

This model existed until the late 1980s. The greatest strides in the reform of the Brazilian telecommunications sector began in 1988, when certain value-added services, such as paging and trunking, were liberalized. However, simultaneously, the Brazilian law was amended to formalize the Telebras/Embratel monopolies. In this manner, competition was hindered, and global service providers were only able to enter the market in the most limited way.

In 1995, in part because of increasing pressure internationally and from customers and service providers, the Brazilian government took a

large step toward reforming its telecommunications market through the passage of a constitutional amendment [13]. This change expressly authorized the government to grant concessions, permits, and authorizations for “public” and “other” telecommunications services to both public and private companies. In response to this amendment, the government first passed in 1996 the Minimal Law [14], which allowed the government to issue regulations opening the value-added services, limited services, and cellular and satellite service markets to competition. Numerous authorizations were awarded pursuant to the Minimal Law. This included licensing of mobile service providers for which the government earned large sums of money,²⁴ as well as numerous business service providers, such as MCI Communications Corp. and Global One.

Following on the heels of the Minimal Law, the Brazilian legislature passed the General Telecommunications Law in 1997 [15]. This law was the first clear step to liberalizing and privatizing the Brazilian telecommunications market, as well as establishing an effective regulatory regime (which included the requirement of establishing an independent regulator). The stated objective of the law is to guarantee all Brazilians access to telecommunications services under reasonable prices, terms, and conditions.

In response to the General Telecommunications Law, the initial step the government took was to privatize the Telebras system. At the time of the privatization of the Telebras system, the government owned approximately 21% of the total equity of Telebras and controlled the voting shares, while the rest of the company was held through publicly traded stock.

In order to best sell the companies, the Brazilian government restructured the Telebras system into three regional wireline companies (for domestic service), eight regional cellular phone companies operating in Band A, and Embratel [16]. In a competitive bid, the government sold all the companies to foreign investors on July 29, 1998, for approximately \$19 billion.

Almost simultaneously with the bidding, the government also began to open the public telephony market to new entrants. The government of

24. For example, the winner of the Band B concession for the São Paulo metropolitan area was awarded to a consortium led by Bell South. This consortium paid nearly \$1 billion more than the next highest bidder. Bidders highly valued these concessions, because of the pent-up demand they believed existed because of the historically poor telecommunications services provided by the Telebras system.

Brazil achieved this by issuing one mirror concession of each regional Telbras company and Embratel. This duopoly was scheduled to last 2 or 3 years, depending upon certain conditions. Full competition was scheduled to occur on January 1, 2002.

Today, the Brazilian telecommunications market is operating in a much-improved manner. While basic services are still provided on a duopoly basis, these services have improved dramatically, with the introduction of new services, extended reach, and improved infrastructure accompanying them. This has even included increased services in the remote areas of Brazil, such as the Amazon region. Further, the introduction of competition in the mobile telephony market has led to a dramatic increase in these services. Today, a large percentage of Brazilians are dependent on the use of their mobile telephones. Further, the influx of limited service providers has skyrocketed. Services, such as FRS and Internet, which were almost unheard of just a few years ago, are available at reasonable rates throughout most of the country and are increasingly in demand.

2.7.3 Hong Kong: making progress

Another interesting case study is Hong Kong. In 1992, Hong Kong began a comprehensive review of its telecommunications market, resulting in a policy paper on the telecommunications sector being issued in 1994. As a result of this policy review, the government decided to set forth the following plan:

1. Establish OFTA as the independent regulatory body;²⁵
2. Authorize competition to Hong Kong Telephone Company (HKTC) (the incumbent monopoly service provider) for domestic services upon the expiration of its license in June 1995.

Accordingly, in July 1995, OFTA authorized four companies to provide fixed telecommunications network services, with a scheduled exclusivity for these companies until 1998 in order to give them a head start on

25. Information regarding Hong Kong was obtained from the Office of the Telecommunications Authority's (OFTA) official home page at <http://www.ofa.gov.hk/t-fact.html>. The Office of the Telecommunications Authority (OFTA) was established on July 1, 1993, as a new government department. OFTA's primary responsibility is to regulate Hong Kong's increasingly competitive telecommunications industry.

the market.²⁶ The government also opened other markets to competition. This included value-added services, such as high-speed data, fax, and private network services.²⁷

In 1997, the Hong Kong government initiated another review of the telecommunications market. This effort led to the early end of the Hong Kong Telecommunications International (HKTI) monopoly in international services; the establishment of the Information Technology and Broadcasting Bureau to coordinate development of telecommunications, broadcasting, and information technology policies; and further market reviews that ultimately resulted in the revision of Hong Kong's telecommunications laws. Accordingly, in 1998, the government negotiated an early end to HKTI's exclusivity in international telecommunications services (which was scheduled to last until 2006).²⁸ In exchange, HKTI had its license modified to include additional services. In January 2000, the Hong Kong market opened for facilities-based international services.

Through these processes, Hong Kong has been able to improve its position as an Asian telecommunications gateway in terms of achieving lower costs, greater service choices, and improved access to services.²⁹ However, as Japan and Singapore improve their regulatory efforts, Hong Kong will have to further refine its regulatory framework as well. Specifically, it will need to ensure that its regulatory regime is effective in curbing

26. The four FTNS licensees were HKTC, Hutchinson Cinybucatuibs Kunutedm Bew, T&T Hong Kong Limited, and New World Telephone Limited. The licensing of these four new companies followed the termination of Hong Kong Telephone Company Limited's (HKTC) monopoly for the provision of local telephone services. Each of the four companies has been issued licenses to provide local fixed telecommunications services in a competitive marketplace.

27. Such services also include local and international telephone, fax, data, ISDN, and Centrex.

28. Under this exclusive license, HKTI is solely responsible for providing certain external circuits and services. Such services include external public telephone, fax, data, and television connections. Additionally, HKTI provides telegram service on a domestic and international level. HKTI also provides international, private, and leased circuits, as well as shore-to-ship and ground-to-air communications from Hong Kong.

29. A wide range of facsimile and data communications services are available in Hong Kong. By March 1997, there were over 314,000 facsimile lines. The growth rate continues at about 2,000 lines per month. Public switched data network services, Integrated Services Digital Network (ISDN) services, and Asynchronous Transfer Mode (ATM) services are also available in Hong Kong.

the monopolistic tendencies of HKTI. In this regard, the government of Hong Kong will have to ensure that it has effective regulations if it wishes to create a truly competitive telecommunications market.

2.8 Conclusion

As we have seen, the aim to achieve a competitive telecommunications market is an important government goal for many reasons. However, in order to ensure a competitive telecommunications market, the governments must be committed to fully implement the three major components of the basic regulatory formula for the creation of competition:

Privatization + Liberalization + Effective Regulation

We have briefly delved into each of these components in this chapter. Throughout this book, these components will recur not only as individual concepts but as motivating forces for other actions.

References

- [1] *Allocation of Frequencies above 890 MHz*, 27 FCC 359 (1959).
- [2] *U.S. v. AT&T (The Modified Final Judgment)*, 552 F. Supp. 131 (D.C. Cir. 1982).
- [3] United Kingdom Statute 1981, Chapter 38 Pt I s 1: British Telecommunications Act 1981.
- [4] Telecommunications Act of 1984, Chapter 23, Part V, § 69, "Dissolution of British Telecommunications."
- [5] Department of Trade and Industry, *Communications Liberalisation in the UK: Key Elements, History* (March 2001), available at <http://www.dti.gov.uk/cii.docs/com.lib.pdf>.
- [6] EU Com(87), 290 Celix No. 587 DC0290, "Toward a Dynamic European Economy," Green Paper on the Development of the Common Market for Telecommunications Services and Equipment.
- [7] *Telegeography*, p. 9 (Telegeography 2000).
- [8] *Telegeography*, p. 10.
- [9] <http://www.wto.org>.

- [10] Ley Organica de Telecomunicaciones (March 28, 2000).
- [11] *Telegeography*, p. 123.
- [12] Telecommunications Law 30/4/97 Government Decrees of 6/10/97 available at <http://www.fedcomcom.ch>.
- [13] Constitutional Amendment No. 8/Aug/95. (The amendment relaxed the federal model that had previously existed under the Federal Constitution.) The Ministry of Communications added to this by presenting the PASTE restructuring initiative (Program for the Recuperation and Expansion of the Telecommunications Systems) from 1995–2003. The PASTE program estimated that \$91.0 billion would be spent on restructuring during that time period.
- [14] Law No. 9,295 (July 19, 1996). The law is also referred to as the “Minimum” or “Specific” Law.
- [15] General Law of Telecommunications, Law No. 9,472 (July 16, 1997).
- [16] Dunning, Thad, et al., *Brazil Internet Development for Whom; Brazil Telecommunications Infrastructure*, Stanford, CA: Stanford University, 2000. (The shareholders in each of the 12 new companies received the same common and preferred shares as they had owned in the parent company.)

Selected bibliography

Cantelon, Philip, *The History of MCI, The Early Years, 1968–1986*, Washington, D.C.: Heritage Press, 1993.

Frieden, Rob, *Managing Internet-Driven Change in International Telecommunications*, Norwood, MA: Artech House, 2001.

Gartner Group, *Liberalization Status Among Telecommunications Markets Worldwide*, Washington, D.C.: Gartner Group, 2000.

Intven, Hank, *Telecommunications Regulation Handbook*, Washington, D.C.: Infodev, 2000.