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Market Liberalization and Development: South Korean and Philippine Telecommunications Service Industry in the 1990s

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This study examines the South Korean and Philippine telecoms service market liberalization in the 1990s. It does not simply compare the two countries' market liberalization cases with its trajectories and outcomes, but also sheds light on the implications of market liberalization towards the international and domestic socio-economic order. It likewise draws attention to the question whether the global mega-trend of market liberalization addresses both material prosperity and social equality regardless of the country where one lives. The research contends that if the study of the telecoms market liberalization chiefly focuses on the economic efficiency based on market figures, it might produce a biased perception of the the related issues. In order to strengthen the field of telecoms study, future research should give the same weight to context-based political economy studies, which could see economic development from a normative perspective in terms of social justice and equality, both domestically and internationally.

Introduction

An unprecedented explosion in knowledge and information characterizes contemporary society. Truly, it is an information society where knowledge and information are among the sources of power. Unlike an industrial one where infrastructures such as roads, railways, ports, airlines, among others, play important roles in the development of economy, an information society relies largely on advanced communication networks and facilities that constitute the telecommunications industry (telecoms). Indeed, telecoms do not only facilitate interpersonal or international communication, but also serve as a medium and catalyst of production in various national industries. Many countries have identified the telecoms as a major source of revenue and jobs.

Telecoms refer to the branch of electronic engineering concerned with the technology of electronic communication at a distance. The telecoms service industry consists of basic and value-added telecoms services. As generally used in the 1996 World Trade Organization (WTO) Agreement on Telecoms Services, basic telecoms services refer to, "end-to-end transmission of customers in the form of voice or data from sender to receiver." Value added telecoms services means, "add value to the

customer's information by enhancing its form or contents or by providing for its storage and retrieval," which include on-line data processing, on-line data storage, e-mail, and voice mail, etc. The scope of telecoms service in this article is limited to the fixed-line phone and mobile phone.

Technological advances in the telecoms industry have facilitated and accelerated changes in a society. Until only some years ago, the conventional market for telecoms services used to be voice delivery with line-networks. However, the rapid expansion of wireless telecoms and the increasing number of Internet users have restructured the entire market. Widening service demands have further accelerated technological development in this area, which in turn creates new demands based on possibility and imagination, which pushes further the frontiers of technological evolution.

Mobile telephone became popular since 1990s. Cellular technology exploded over the last decades providing telecoms anytime, anywhere. Mobile phone became a major market in the telecoms industry. International roaming and wireless Internet connection - predicted to dominate the telecoms market once there is full commercialization of the International Mobile Telecommunications-2000 (IMT-2000) - dominate the newly emerging market.

Technological convergence provides another impetus for changes in the telecoms market. Abrenica states that the effects of the transition of telecoms to the digital era, as the modernization of the telecoms network effected at lower costs, and the further enhancement of technological convergence created new services that benefit the basic telephone service.[1] These added services opened the telecoms service market to the entry of new firms that grabbed these market opportunities by leasing lines from incumbent carriers. The digitalization of contents and network operations implied convergence of several fields of industries such as publishing, broadcasting, telecoms, and so on.[2] Telecoms is one of the most technology-intensive industries, thus changes in the market and its regulations are inevitably depending on the current and future trends of technological development in related fields.

Another important change in the telecoms industry since 1980s was the wide expansion of deregulation trends. Traditionally, the state involved itself in the telecoms service industry either by an administrative function of public service or through a state-controlled monopoly corporation. The

"public nature of services" and "economies of scale" provided the justification of the monopoly structure of the industry. However, as neo-liberal paradigm began to prevail in the area of state economic policymaking, the role of market competition in enhancing public services became a more persuasive argument. Technological innovation and expansion of market demands in terms of quantity and quality further eroded the argument of natural monopoly.

The term "liberal," with its long European tradition, implies a commitment to individualism, free market, and private property. Liberals assume that the market arises spontaneously in order to satisfy human needs and that, once it is in operation, it functions in accordance with its own internal logic. The internal logic implies the tendency towards equilibrium and inherent stability based on the rationality of human behavior. The long-term harmony of interests underlies the market competition of producers and consumers, a harmony that will set aside any temporary conflict of interest. Individual pursuit of self-interest in the market increases social well-being because it leads to the maximization of efficiency, and the resulting economic growth eventually benefits all.[3]

Several studies have tried to figure out the main backgrounds of telecoms market liberalization trends.[4] As for the motivations of telecoms market liberalization, the studies pointed out the growing awareness of the inefficiency of the incumbent monopolists and technological change. Although many studies blame the monopoly control of telecoms service industry for the economic inefficiency, one cannot generalize because there were severe differences in performances among different countries. The common motivations of telecoms market liberalization in the Third World Countries (TWCs) came from the economic reform efforts where telecoms reform is a prerequisite for its proper implementation. Some important factors such as technological development, democratization, and international pressures made the telecoms market liberalization a politically acceptable policy choice in many TWCs.

Some studies, Cowhey and Straubhaar for example, showed the complexity of telecoms liberalization in the TWCs.[5] They observed that the TWCs face double challenges: universal service and advanced service demands. The TWCs have yet to complete the expensive and logistically difficult task of providing high-quality basic services to large parts of their population. Moreover, with foreign debt problems, many countries have

difficulty in public financing. At the same time, they have clients demanding services that are even more sophisticated on new commercial terms. These clients are both multinational firms and domestic commercial enterprises that are starting to become significant global competitors with increasingly sophisticated communication needs. The double challenges make upgrading the network imperative, but large users are highly suspicious of traditional monopolies due to the experience of ineffectiveness.

Many studies have prioritized the market function in telecoms market liberalization. Since early 1990s, with several years of liberal market experiences, empirical studies on telecoms market liberalization started appearing.[6] These studies emphasized the effectiveness of market-oriented reform based on empirical data. Case studies with the positive perspectives on telecoms market liberalization ranges all over the world from the advanced countries to the TWCs. They proved that deregulation had striking results on the price and quantity of service. The intensity of competition in local telephone service, long considered a natural monopoly, was also especially intriguing. In a growing number of TWCs, liberalization did not hinder the pursuit of universal service; instead, it actually boosted network penetration and the availability of services to the population. Partly, this was because countries that allowed private investors in the telecoms arena required specific performance obligations such as "build-out" in rural areas – expanding main lines to reach a fixed punctuation target. Improvements in the telecoms sector also had economy-wide benefits, like faster economic growth, better response to basic needs, cost savings, and attraction of foreign investment.

On the other hand, there are also scholars who offer critical perspectives.[7] These studies mostly involved telecoms reform policy in TWCs. They were principally concerned with issues such as equity, public participation, economic and power distribution, welfare benefits, social accountability, and the protection of national, cultural, political, and personal sovereignty. They argued that state deregulation and private participation in telecoms service sector might broaden the domestic and international socioeconomic gap between the privileged and the underprivileged.

This study examines the South Korean and Philippine telecoms service market liberalization in the 1990s. Though it focuses on the market liberalization trajectories and its outcomes, it also considers implications

of market liberalization towards the international and domestic socio-economic order. With the normative terms of development, market liberalization policy should not be only a concern of quantitative market expansion, but also take a serious look into the qualitative improvement such as justice and equality.

Here, the term development refers both to quantitative and qualitative improvement. In examining development, it takes into account two aspects of the outcomes of telecoms market liberalization: economic efficiency and social welfare. Economic efficiency refers to quantitative development. To measure quantitative development, this study looks into market figures such as telecoms network expansion and the scale of revenue generated by the telecoms service industry. On the other hand, social welfare is rather a qualitative development related with just distribution of socio-economic benefits generated by telecoms market liberalization. Two views qualify social welfare: one is fair market competition environment in the telecoms industry, believed to be beneficial to the consumers, the other is the state efforts to guaranty that the entire population justly enjoys the deserved benefits from the telecoms development.

The article tries to draw attention to the question whether the global mega-trend of market liberalization tends to address both material prosperity and social equality regardless how developed the country one lives in and the social status one belongs.

Telecommunications Service Industry in South Korea

Market Liberalization Trajectories

Market liberalization in the South Korean telecoms service industry began in the late 1980s, and full implementation came in the 1990s. The Chun administration already subscribed to the ideology of market liberalization in the early 1980s. With the restructuring of the administrative organization, direct control of the telecoms service sector by the government shifted to indirect involvement by separating the business entities from the regulatory body.

In the late 1980s, the South Korean telecoms service market was under pressure to make significant progress. Until this time, the South Korean policy had focused on the expansion of service availability and not on service quality and its contents. To address this imbalance, the

Commission on Information and Telecommunication Development (CITD) was formed in March 1989 under the supervision of the Ministry of Postal and Communication, now the Ministry of Information and Communications (MIC). To produce the first report on structural adjustment and the introduction of market competition in the telecoms industry, CITD relied on members coming from several sectors of society including academic, business, bureaucracy, and research institutes.

Before the series of telecoms market reform, the state-owned enterprise, Korea Telecommunications Authority (KTA) - established in 1981 by separating the telecoms business from the government's direct control - virtually monopolized the entire voice telephone service market. Voice phone was then the only service widely used in the telecoms service market in South Korea. By amending the Telecommunications Business Law, South Korea finally engaged in market liberalization in 1989. The privatization of KTA, renamed Korea Telecom (KT), Data Communication Corporation and Korea Mobile Telecommunication Co. were the result of this amendment. Data Communication Corporation, a corporation founded in 1982 to provide data communication service such as information database service and value added network services, and Korea Mobile Telecommunication Co., established in 1984 and a provider of car phone and paging services were both privatized in 1993. The privatization of KT started in 1994 and ended in 2002. The prolonged privatization process was due to several reasons, e.g., policy changes in the terms and conditions of privatization, consideration of stock prices, etc.

In 1992, the Korean government set a plan for the market liberalization of the telecoms industry. The timetable was based on the assumption that by then the basic telecoms service demand, a teledensity of 30 (30 phones per 100 persons), would have been met. This timetable came under consideration of the local telecoms manufacturing sector. Market liberalization per se implies that domestic manufacturers have to compete with foreign suppliers. The introduction of competition in the service market could result in huge amount of fresh investments in telecoms infrastructure. Opening up the industry to the private sector meant that the local manufacturers would lose their privilege to supply telecoms equipment to the state-owned KT. The local manufacturers would certainly be the losers in such open competition, for foreign suppliers can provide telecoms facilities to KT at a lower price. KT bought its facilities, specifically electronic

exchanges, from the local suppliers at a higher price, over 100 US$ per line than that of foreign suppliers.[8]

Thus, the Korean government began to examine the domestic law and regulations in the telecoms industry to cope with the international pressure that was becoming more intense. The basic strategy was to induce competition among local players to strengthen competitiveness before opening the market to foreign players.[9]

However, the South Korean government had to liberalize the telecoms market earlier than its original plan due to external pressures, specifically from the United States of America (USA). Starting 1987, the trade negotiation on telecoms market between South Korea and the USA went through several rounds without reaching any mutually acceptable agreement. Eventually, the USA enlisted South Korea in their "priority foreign country" in 1989, which meant that the USA could retaliate in a trade war if no mutually acceptable conclusion was reached within the set time. Given South Korea's export dependency on the USA market, it cannot afford a trade conflict that could devastate the country's economy. Such heavy pressure forced the South Korean government to design a market liberalization schedule. South Korea implemented a three-fold telecoms market reform policy in 1990, 1994 and 1995.

The 1990 market reform focused on two areas. First, South Korea adopted a classification system of telecoms service providers. The simple criterion was whether the service provider does or does not have a network. Those who have a network were tagged as "network service provider" and the rest as "additional service provider." There were two further classifications for a network service provider: "general service provider" and "special service provider." Special service providers included those whose services have coverage limitations or special technology, i.e., internal network or data transmission, etc.

Second, a limited competition was initiated in some telecoms service areas: international telephone service, mobile phone service, and additional services. The duopoly market structure was introduced in international and mobile phone services. For the additional services, full competition policy was applied. In each classified service area, a different set of regulations was applied. In case of market entry, general service areas needed to get

a "nomination" from the state authority, for special service areas an "approval," and for additional services a "registration" only.

Upon consideration of the public nature of the business, a strict limitation of shareholding was imposed on the general service entities, a relaxed limitation for the special service area, and no limitation for the additional service area. In the general service entities, the largest shareholder cannot possess more than 10 percent of the company equity; for the telecommunication facility manufacturers not more than three percent; and for foreigners, to possess any equity was not allowed. In special service area, the largest shareholder cannot posses more than 1/3 of the company equity; for the telecommunication facility manufacturers not more than 10 percent; for foreigners not more than 1/3 of the company equity, and they are not allowed to become the largest shareholder. State institutions can invest within 10 percent but they cannot be the largest shareholder.

The 1990 market reform achieved some its objectives such as diversification of service area and the expansion of market size. According to Choi, competition in international telephone service diversified new services such as the third person charge service, instant rate informing service, several discount services, etc.[10] The paging services also diversified its service contents and had a significant market expansion. The number of subscribers increased drastically from 2.5 million in 1993 to 8.5 million in 1995.

However, the 1990 market reform had its limitations. The state had adopted the Positive Listing System in order to control entry and exit of service providers according to the classification. Such system produced regulatory lags and discouraged the development of new services. For although a new service was developed, there was still the long process of recognition, classification and authorization of services before engaging in the business. The expected benefits from introducing competition in the market did not materialize as intended. This was due to several restrictive regulations such as mandatory maintenance of the duopoly market and strict control of market entry of new players. Since the entry of new players into the market was controlled, the existing players easily maintained the profit level by mutual negotiation, ignoring any service improvement or technological development.[11]

Apparently, the 1990 market reform was conceived to cope with the forceful request of the USA that additional telecoms service area be fully opened and that the mobile phone service area be partially opened to foreign players. It was argued that the limited reform was the best option for Korea in order to avoid any possible trade conflict with the US and to protect the weak domestic telecoms service industry. It was obvious that the Korean government intended to create a desirable market with the heavy hand of regulation in it.[12]

Done to cope with the fast changing internal and external environment, the 1994 market reform engaged three areas. First, taking into account the trend towards technological convergence between wire and wireless telecoms, it removed the distinction between general and special service, and integrated them into the network service. The previous regulation prohibits line-based service providers to engage in the wireless telecoms services and vice versa under the classification of general service and special service. Wireless telecoms service was classified as special service. In the new regulation, network service providers could diversify their businesses within the listed services in the Telecommunication Business Act (TBA) whether it is line service or wireless service. If any network provider wanted to engage in a service not listed in the TBA, the authority would have approve it. However, additional service providers can operate any kind of telecoms service business, except for the listed areas of network services.

Second, it removed the prohibition on telecoms facility manufacturer from becoming the largest shareholder, though the limitation of largest shareholder's equity share as defined in the 1990 reform remained. Since the facility manufacturers were mostly *chaebols*, entitling them the same privileges as other players in the telecoms service market implied significant changes in the future market structure. *Chaebol* include family ownership, control and management; numerous subsidiaries under a single control and seemingly excessive diversification; cross shareholding among the subsidiaries within a group through equity investment; and mutual loan guarantee by subsidiaries, etc. The authoritarian regimes in Korea made close ties with *chaebols* in order to control the business sector handily and to meet the developmental targets effectively.[13]

Third, the new measures introduced market competition into the national long-distance telephone service. The aim was to strengthen the competitiveness of local service providers prior to opening of the entire

domestic market to foreign players. Existing regulatory barriers caused the delay in introducing several advanced foreign telecoms services into the domestic market. The industrial policy of the South Korean government prioritized the development of local technology ahead of implementing any services in the domestic market. If the related technology was not developed, the Korean state did not even allocate necessary frequency to test a new telecommunications service.[14] As a result, the telecoms service industry remained backward. In order to cope with such problems, the South Korean government decided to introduce several new telecoms services, specifically in the wireless telecoms services. Since mobile telephone service was considered as one of the most promising businesses in the future telecoms service market, the decision to introduce the Personal Communication Systems (PCS) service heralded significant changes in the Korean telecoms service market.

Although market competition was introduced into all service areas except for local telephone service, several limitations still restricted competition. The protected duopoly market structure could not be expected to generate any meaningful competition. The state authority must first announce the issuance of a license before one can file an application. Thus, the state controls any additional market entry.

The removal of restrictions for the telecoms facility manufacturers to be the largest shareholder of a telecoms service company created many controversies since the facility manufacturers were the top *chaebols*. By removing such restriction, it was foreseen that the *chaebols* would gobble up the telecoms service market, considering their financial and managerial capabilities, which could not be surpassed by any other business entities in Korea.

The 1995 market reform intended to promote further competition in the telecoms service market by issuing new licenses in the several service areas. More freedom was given to potential market players to enter the market by doing away with pre-announcement system. By further opening the domestic telecoms service market to foreign players, the South Korean government hoped to gear up the domestic market competitiveness for the international competition. The intention was to make the concept of market competition a truly functional one.

Further reform was done in the state-owned backbone carrier, KT in order to secure the national telecoms network and at the same time to grow as a leading company in the national telecoms industry. It was given greater discretionary power in operating business, and several regulatory limits as a state-owned company were removed. The improvement of business competitiveness was a major concern.

With the issuance of new licenses in several service areas, the structure and functions of the Communication Commission as a regulatory body was strengthened and to coordinate and properly regulate expected market problems.

Moreover, the Korean government revised the TBA, and announced the expansion of market competition in all sectors of the telecoms service industry in 1997. The revised TBA allowed firms to change the service tariffs without pre-approval from the state authority. Only the KT's local telephone service and SK Telecom's mobile telephone service were still bound by the state regulation in their service tariffs. Since these two service providers were the dominant market players in their own service area, their arbitrary manipulation of service tariffs might exclude any potential for new market players to emerge as meaningful competitors.

The conventional line-based telephone service remains virtually a monopoly. However, the mobile telephone service and other new technology-based telecoms service market have entered the stage of meaningful competition. The South Korean government expected the 1995 market reform to enhance domestic market competition as a means of preparing for the impending market opening to foreign players. However, as Jang pointed out, although most of the telecoms service sectors were opened for market competition, it did not necessarily mean that the government totally pulled out from it.[15] Many services still heavily depend on the national backbone line of KT. The government intervention in rate negotiation for interconnection is critical in determining the winner and the loser in the market.[16]

Changes in the Korean Telecommunications Service Industry

Since South Korea's first telephone in 1898, the development of telephone service has been closely connected with the localization of telecoms technology. The first locally developed telephone set,

Communication No. 1 Series, came out in 1962. Since the successful economic development in the 1960s, telecoms service demands increased drastically.

According to a research, the penetration rate of fixed telephone service correlated with the level of GDP per capita of the country.[17] The survey suggested that a household must earn at least an annual income of US$ 1,340 to afford the service provided by the carrier that deploys the most efficient technology or best practice (lowest operating cost). Per capita gross national income (GNI) of South Korea has passed this level in 1978 (1,399 US$).

The rapidly increasing telephone backlog problem since the mid-1970s prompted the Korean government to consider the importation of the electronic switching system to accommodate a larger number of subscribers. However, upon recognizing the importance of telecoms technology, localization of the telecoms equipments began to emerge as a government policy. The increasing local demands of the telecoms equipment naturally attracted the state's attention to find a local substitution.

Under such circumstance, the Korean Institute for Telecommunication Technology, a special research and development (R&D) institute for developing telecoms technology, began to operate with the aim of developing the telecoms switching system in 1977. The test operation of electronic switching system, Time Division Exchange (TDX-1X), in 1982 was successful. Actual commercialization of the locally made switching system started since 1984 with the model named TDX-1. The wide diffusion of the TDX series resolved the decade-long telephone backlog and met the people's increasing demand. By November 1997, the number of TDX circuits in Korea reached 10 million, and it covered nearly 50 percent of all circuits installed in Korea. The new generation switching system, TDX-100, had been developed and operated since 1999, which integrated fixed-line switch, wireless switch, and Integrated Services Digital Network (ISDN) switch system. The capacity of the TDX-100 can accommodate a total of 700,000 subscribers including fixed line and mobile subscribers.[18]

Besides the technological development, South Korean telecoms service industry rapidly increased since the 1980s. Only 2.7 million telephone lines at a teledensity of 7.1 existed in 1980. Since 1982, the

average telephone-line-supply was one million per year, and the total telephone line reached ten million in 1987, which opened the era of one telephone per one household. The continued monopoly policy in each service sector throughout the 1980s made the industry develop in a more or less ambivalent direction. With the focus on quantitative expansion, the improvement of the level of technology and the diversification of service contents were mainly ignored.

The South Korean telecoms service market in the 1990s went through several restructuring processes. Competition gradually seeped into each sector of telecoms service market. With the introduction of new technologies in the field, the contents of line service were extremely diversified and expanded. Moreover, with the rapid growth of Internet users, data communication grew as one of the important sectors in the industry. The growth of mobile phone subscribers already outnumbered the fixed line users. As Table I shows, the teledensity of South Korea exceeded 44 per 100 people and cellular phone subscribers over 50 per 100 people as of 1999. South Korea has one of the highest teledensity in the world.

Table I. **Telecoms Service Industry, South Korea 1990s.**

Year	Fixed Line Subscribers (1,000)	Teledensity of Fixed Line (per 100 person)	Mobile Phone Subscribers (1,000)	Teledensity of Mobile Phone (per 100 person)
1990	13,276	31.0	80	0.2
1991	14,573	33.5	166	0.4
1992	15,593	35.4	272	0.6
1993	16,686	37.4	472	1.1
1994	17,646	39.3	961	2.1
1995	18,600	41.2	1,641	3.6
1996	19,601	43.0	3,131	7.0
1997	20,422	44.4	6,910	15.0
1998	20,489	43.3	13,982	30.2
1999	20,518	44.1	23,443	50.4

Source: Statistical Indicators of Information and Communications Industry 2000 Yearbook of Statistics, ITU (2001).

The telecoms service market structure consists of line and wireless services. Line service includes local, national long distance, international long distance, public payphone, and leased line service. Wireless services include mobile phone, paging, trunked radio systems (TRS), wireless data services, etc. The total revenue from the line service sector has been decreasing since the mid-1990s. In 1999, the revenues from line services decreased 14.8 percent in local, 13.6 percent in national long distance, 2.8 percent in international and 33.6 percent in public phone service. This is mainly due to the wide expansion of wireless services.

However, data communication through leased phone line shows fast growth with 20.8 percent increase in 1999. This represents the change in use of phonr lines as accelerated by the Internet subscribers. As such, the technological development of wireless telecoms in the 1990s restructured the entire telecoms service market. The mobile phone became a leading service sector in the market. The fast losing market of paging service represented the swiftness of market shift toward advanced services. It also implies that market players need to reinvent themselves promptly and ceaselessly in order to survive in the fast-changing market.

With the introduction of personal computer (PC) for communication services, the market exploded in the second half of the 1990s. Due to the comparative advantage of service fee in long distance and international communications, PC communication encroached on the conventional telecoms market. The convergence between voice and data communication networks has been an emerging market. In the next few years, The Voice over Internet Protocol (VoIP) is expected to grow rapidly in South Korea.

A noticeable phenomenon in the world telecoms service market in the 1990s is the fast growing cases of mergers and acquisitions (M&A). The scale of M&A is not limited at the domestic but also extends to the transnational level. The Korean telecoms market is not an exception from the trend. M&A used to be a common practice for business companies to seek expansion in their business scale and to explore new market opportunities. Along with the fast changing technology and its convergence, market players in the South Korean telecoms service industry have used M&A as an important strategy to survive and expand their business.

Since the financial crisis of 1997, M&A has attracted enormous attention in Korea not only in telecoms sector but also in all other Korean

industries. The most significant M&As in the Korean telecoms service industry have been occurring in the mobile phone market. The leading mobile phone company, SK Telecom, acquired the third ranking company in the market, Shinseagae Telecom. The link-up of their respective market shares was expected to be above 50 percent, which was not allowed by the fair competition law of Korea. The acquisition was approved, however, on condition that market share be lowered under 50 percent before the start of operations. SK Telecom had to abstain from recruiting new subscribers until the market share of other players reached 50 percent.

Another case of M&A was the KT's acquisition of Hansol.Com, the fifth biggest mobile phone company in terms of market share. The remaining market player, LG Telecom, began to strengthen its market position right after joining the race of IMT-2000 business. A new round of M&A is expected in the telecoms industry. The completion of KT's privatization in May 2002 without any strong affiliation of the existing market players eased lingering apprehensions about the possible emergence of a dominant market player.

Telecommunications Service Industry in the Philippines

Market Liberalization Trajectories

One can explain the development of the Philippine telecoms market liberalization in a number of ways. However, its single most prominent reason was prolonged poor service. After 40 years of independence, teledensity has gone only up to 1.7 percent, with service coverage representing only 16 percent of total land area. There were barely half a million lines servicing a population of 60 million people.[19] Aside from the mounting backlog problems, Abrenica pointed out that the problems of the Philippine telecoms sector were more serious than what the supply shortage suggests.[20] Poor quality of service, unbalanced distribution of service between rural and urban areas, outdated infrastructure, and inadequate interconnection of telecoms facilities stemmed from weak pressure on carriers to upgrade and expand existing infrastructures owing to the absence of market competition.[21]

Under the monopoly system by private hands, the market player did not have an inherent incentive to promote the social welfare by providing affordable services to high-cost areas. It also had a tendency to indulge in anti-competitive practices. Thus, a strong comprehensive policy was

required to address these concerns. As a result, pertinent provisions that regulates or prohibits monopoly when the public so requires were included in the 1987 Philippine Constitution.[22] These provisions paved the way for the deregulation of the Philippine telecoms industry. Due to severe public criticism and dissatisfaction with the performance of the virtual monopoly company, Philippine Long Distance Telephone Company (PLDT), the telecoms service sector was thrown open to competition.

Although the process of telecoms market liberalization started in 1987, it was only in 1989 when new licenses were granted and several telecoms markets were opened. Two firms were allowed into the mobile telephone market. The domestic and international exchange services were also opened to competition. However, due to strong resistance from the incumbent monopoly company, the state efforts to liberalize the market did not produce any significant changes.

A sweeping change in the Philippine telecoms market came under the Ramos administration with the issuance of two executive orders (EO) in 1993, namely EO 59 and EO 109. EO 59 requires compulsory interconnection of authorized public telecoms carriers in order to create a universally accessible and fully integrated nationwide telecoms network, thus encouraging greater private sector investment in telecoms. EO 109 requires all mobile phone market entrants to install at least 400,000 telephone lines within three years, and international exchange market entrants to put up 300,000 lines within five years. EO 109 served as the vehicle to implement the Service Area Scheme (SAS) and the Basic Telephone Service Program (BTSP). Combining profitable and unprofitable areas, the SAS and the BTSP divided the country into 11 service areas, which in turn were granted to eight telecoms carriers.

To supplement the EO, the Philippine Congress ratified in 1995 Republic Act (RA) 7925 or the Public Telecoms Policy Act of the Philippines. RA 7925 promotes and governs the development of Philippine telecoms and the delivery of public telecoms services. RA 7925 also serves to address the need for an established policy framework in the industry, laying down the foundation for the administration, conduct and direction of the Philippine telecoms industry. It also defined the number of areas that concern public authority and the market principle related to telecoms service.

RA 7925 deregulated value-added services (VAS). A VAS provider that does not set up its own network and relies solely on the transmission, switching and local distribution facilities of enfranchised telephone companies does not have to secure a franchise, it needs only to register with the National Telecommunications Commission (NTC) in order to run its business. RA 7925 also mandates the privatization of existing facilities. It also took into account the ownership structure of the telecoms entities in order to encourage efficiency and public accountability.[23]

With respect to the equity ownership in network services, the maximum equity share owned by a national or a foreigner is limited to 10 percent in line-based service and 33 percent in wireless service. From 1999, a foreigner can have the largest percent share and since 2001, foreigner equity ownership became 49 percent. Foreigners can engage in voice resale services starting 1999, and the restriction of foreign equity ownership removed by the end of 2000.

Rate and tariff fixing were deregulated with the removal of the 12 percent cap on rate of return. Instead, a sliding standard of fair, just and reasonable returns was provided to encourage investments in the industry. In sectors where sufficient competition was attained, rate fixing was fully deregulated. With RA 7925, the policy of network interconnection was emphasized, but instead of mandatory regulations, access charge or revenue sharing arrangements were left to the interconnecting telephone companies' contractual agreements. The NTC intervenes only in cases of irresolvable disagreement or prejudice to public interests. Such relaxed regulatory mechanism raised apprehensions about the environment for fair competition between the existing company and the new entrants.

Changes in the Philippine Telecommunications Service Industry

The Philippines had its first telephone system in 1890. The Philippine Island Telephone and Telegraph Company began its operations in Manila with 400 subscribers in 1905. The history of the PLDT dates back to 1928 when it was incorporated by the General Telephone and Electronics Corp. (GTE) under the Corporation Law of the Philippines. A merger of four telephone companies under common US ownership, namely Philippine Telephone and Telegraph Company (PT&T), Cebu Telephone and Telegraph Company, Panay Telephone and Telegraph Company, and Negros Telephone and Telegraph Company followed this. It was only in 1967 that PLDT

transferred its ownership to the Filipino people. The GTE prepared to divest itself of ownership in anticipation of the expiration of the parity agreement between the Philippines and the U.S.[24] PLDT virtually monopolized the entire Philippine telecoms service market until the early 1990s.

However, with EO 59 and EO 109 and RA 7925, the Ramos administration drastically altered the landscape of the Philippine telecoms service market and expanded the Philippine telecoms infrastructure.[25] However, since the Philippines was not able to develop local telecoms facility manufacturing industries, it has to import the entire telecoms equipments for use in the domestic market from other countries.

Table 2. **Telecommunications Service Indicators, The Philippines, 1990s.**

Year	Fixed Line Subscribers (1,000)	Density of Fixed Line (per 100-persons)	Mobile Phone Subscribers (1,000)	Density of Mobile Phone (per 100 persons)
1990	610	1.00	-	-
1991	648	1.04	35	0.06
1992	661	1.04	56	0.09
1993	860	1.32	102	0.16
1994	1,110	1.66	172	0.26
1995	1,410	2.05	494	0.72
1996	1,787	2.55	959	1.37
1997	2,078	2.87	1,344	1.86
1998	2,492	3.42	1,734	2.38
1999	2,892	3.88	2,850	3.83
2000	3,061	-	6,454	-

Source: NTC official web-site. ITU Yearbook of Statistics, 2001, ITU.

The Philippine telecoms service market has experienced a structural change alongside the evolution of its technology. The revenue proportion from the line-based telephone services has been declining compared with mobile phone services and data network services.[26] In 2000, at 30.4 percent, the local telephone service is still the single largest revenue source of PLDT. However, revenues from cellular services have now overtaken international revenues to become the second largest revenue source. Cellular services accounted for 25.2 percent of total revenues while international revenues amounted only to 20.8 percent of the total revenue.

National long distance accounted for 16.8 percent share, and the fast growing data and other network services, 5.2 percent.

During several decades of monopoly, the Philippine telecoms service market was virtually ignored. Telephone penetration rate remained below one percent until 1990. Since 1995, the implementation of EO 109 and RA 7925 raised the telephone service availability drastically. Table II shows that in the first few years of market liberalization, a significant difference in teledensity occurred. The same table also tells the dramatic increase of mobile phone subscribers that has outran the number of landline subscribers. Krairit noted that the market liberalization in the Philippines appeared to have fewer effects on fixed telephone services than it did for mobile telephone and internet services. "The fixed telephone penetration rates can be better explained with the long-term economic, political and policy effects alone than by the competition in the industry. However, the mobile telephone and internet service penetration rates can be better explained by effects of competition policies than by economic and policy factors alone." [27]

Many positive signs were noticed after the adoption of market liberalization. Competition entered all segments of the industry, providing incentives for firms to expand their networks, introduce new technologies and services, and embark on new business ventures. Foreign technology, financing and expertise were made accessible. Along with the decision to allow new companies to enter the previously monopolized telecoms market, came the influx of foreign investors. Access to international capital markets improved, and financing became more easily available in greater volumes and at lower rates than previously recorded.[28]

Abrenica pointed out that the liberalization of the telecoms sector contributed to bail out the sagging Philippine economy by triggering an investment surge from 1994 to 1997.[29] Responding to the pressure of competition, new and incumbent carriers funneled a larger proportion of their revenues to capital formation. In addition, there was an upheaval in investment efficiency as incumbent carriers streamlined their organizations long nurtured by years of unchallenged market domination.

The market liberalization policy also brought about several other positive results. The telecoms service fees began to move downwards. After five years of liberalization, airtime rates went down by an average of

20 percent in all services. Similarly, more innovative plans were introduced lowering costs and giving consumers more control. The coverage of telephone services in the country also improved. In 1992, only 20 percent (309 of 1,601 municipalities) enjoyed the benefit of having a phone. By 1997, the nationwide coverage was about 37 percent (596 municipalities).[30]

Although the market liberalization program resulted in many positive changes, still, there were a number of problems. Among others, the conflict between the incumbent market player and the newcomers on fair competition has been a prominent issue. The introduction of competition alone was not enough to bring about fair market outcomes, for it was a fact that liberalization hardly eroded the incumbent's market dominance. Edgardo Cabarios, NTC common carriers authorization department head, recognized in an interview that the most prominent regulatory problem in the Philippine telecoms market is the interconnection issue.[31]

Another vexing issue was the roll-out obligation under EO 109. A number of new service providers had difficulties in meeting their commitments. Under the government's BTSP, these carriers committed themselves to provide a certain number of landlines in specific service areas by the end of 1998. When Antonio Cojuangco was still the chief executive officer of PLDT in 1997, he expressed doubts in the new players' capacity to meet their commitments. As a consequence, he predicted M&A in the industry if the state were strict enough in asking the new carriers to meet their landline commitments.[32] As foreseen, half of the new carriers could not meet their obligations by the end of the program year.

Furthermore, none of the new carriers accomplished their commitments of service area coverage under the SAS, which was designed to make universal service possible. At the end of the program in 1998, they were unable to hit the target of 87 percent coverage. There were several reasons cited for the failure of commitment such as peace and order problems and poor business environment.[33]

The geographical imbalance in service provision raised another concern about the universal service. The discrepancies between the National Capital Region (NCR) and other regions were extremely wide. The line teledensity of NCR in 2001 was highest at 14.24 percent, while the lowest at 0.82 percent is Region IX (except ARMM, at 0.40 percent). The

subscription rate to the line installed remained less than 50 percent, which implies that EO 109 forced the new carriers to lock half of their investment in an area where the return was unclear, at least for the meantime.

EO 109 intends to provide telecoms services to the rural areas following the concept of universal access. However, it should have considered the annual income and purchasing power of the people in the rural areas. To be able to afford the charges of an average efficient carrier required a household to have an annual income of at least US$ 3,200. Using the 1994 income distribution data of the Philippines as basis, only about 30 percent of Filipino households in the Philippines would be able to afford telephone services after subsidies had been removed and local carriers had attained the average efficiency level.[34]

In an interview with a PLDT personnel,[35] it was noticed that the company has been studying the possibility of expanding telephone service to the remote rural areas by downsizing the basic service fee or other schemes. However, since the nature of business corporation is to make profit, it is difficult to narrow the gap between the idea and the practice. In order to complement private efforts to realize the universal service goal, the Ramos administration initiated the Municipal Telephone Development Program (MTDP) or *Telepono sa Barangay* Program funded by a huge amount of national budget. The MTDP was a long-delayed project of the state intended to expand telephone services in the provinces. However, this project was abandoned under the Estrada administration due to accusations of overpriced contract and financial constraints. Based on projections by the Department of Transportation and Communication (DOTC), the government would spend $11,000 for each line installed compared to the $800 to $1,500 to be spent by private firms with existing digital exchanges.[36]

In interviews with other market players,[37] it was noticed that they recognize the limitation of the market size in the Philippines. One of the leading mobile phone companies, Globe Telecom, targeted only 20 to 25 percent of the population for their available market. Under such assumption, the Philippine mobile phone market in the year 2001 was already getting saturated. Therefore, the business strategy was to enhance the service quality to attract the existing users rather than to cultivate new subscribers. It was also the reason why Bayantel was not so aggressive to get involved in the mobile phone business, and instead, focused their business on the

data communication through landline. Its target market also was not so much on the residential telephone service, but more on the corporate site, which is said to be more lucrative. Observed from the business sector's market strategy, it could not be expected to improve the idea of universal service with the market liberalization policy alone.

Summary and Conclusion

South Korea and the Philippines followed the global trend of market liberalization since the late 1980s, speeding this up in the 1990s. Given a different market situation and different sets of weaknesses, South Korea and the Philippines pursued different goals in the market liberalization scheme. In the case of South Korea, the basic need of the telecoms service was already met before the country started market reforms. Thus, the reform focused on enhancing competitiveness of the industry by rearranging the market structure and reformulating the existing regulations. It was also designed to introduce advanced technology, and at the same time, to strengthen the domestic market players by providing a competitive environment ahead of full opening of domestic market to foreign players.

On the other hand, the Philippines tried to solve the problem of a notoriously bad telecoms service. The malfunction of the telecoms service sector was one of the prime problems that the Philippine government had to resolve so that the distressed national economy would pick up. Since the industry was in private hands, introducing market competition was considered as the best option to discipline the stagnant monopoly company without breaching the international trend of neo-liberalism.

With regard to the market reform strategy, South Korea applied a gradual market opening strategy. The intention of gradual change was to minimize any possible negative effects of market liberalization on domestic industry. Each step provided policy makers with references to be considered in the next stage of market liberalization. Meanwhile, the external environment did not allow the gradual market liberalization strategy to go at its own pace. The South Korean government was forced to accelerate its market opening measures. The conflict between the incumbent market player and new entrants was not prominent in South Korea. In fact, in the beginning of the market opening, the new market entrants were given certain advantages to increase their market share as the government designed to set a foundation for meaningful market competition. Until the

1995 market reform, KT was simply nurturing and facilitating the new market players rather than competing with them.

The Philippine telecoms market liberalization followed a quite different path. With EO 59 and EO 109 and RA 7925, the Philippine telecoms service market met a storm of changes. The Philippines experienced conflicts between the incumbent and the new market entrants, which was the most prominent issue in the early stage of market liberalization. In addition to the fact that the incumbent was a profit-oriented private corporation, relaxed regulatory measures such as determining the interconnection tariffs by voluntary mutual agreement allowed the incumbent backbone carrier, PLDT, enough room to protect its own stakes by fending off the new competitors. Although it succeeded in inviting new market players, the Philippine government did not show a strong will to nurture a desirable market competition environment.

South Korea and the Philippines have different sets of backgrounds in the evolution and growth of the telecoms service market. In the beginning, the Korean telecoms service industry was organized as a monopoly structure under the concept of providing a public service. Thus, the performance of service directly linked with the regime's effectiveness. When the country economically reached the take-off stage in the 1970s, Korea was ruled by an Import Substitution Industrialization (ISI) regime. The growing local demands of telecoms service urged the state to develop local telecoms manufacturing industry. The state-led development project on telecoms equipment proved to be a success. As a result, the local demands of telecoms service were effectively met by locally made equipment. Once the market liberalization pressure from external forces came, specifically from the USA, the quantitative demands of the telecoms service in South Korea were already near to meet.

The Philippine telecoms service industry was governed by the private sector under a virtual monopoly structure. The long period of privileged monopoly position did not much motivate the company concerned to enhance service level and to develop related technologies. Since the Philippine state carried out the policy of free trade for a long time after the short period of ISI regime in the 1950s, any systematic efforts to spawn local telecoms manufacturing industry did not succeed. The virtual monopoly position of the telecoms service market in the hands of profit-oriented private sector secured a comfortable profit margin in spite of the absence

of innovation in the industry. As a result, the stagnant sector of telecoms service even further dragged the slow-moving economy of the Philippines.

Using the figures of per capita GDP, the level of the two countries' telecoms service industrial status is illustrated in Table III. The total telecoms services revenue and the line teledensity are closely related with the economic performance of each country. There is quite a difference though in the growth patterns of teledensity in mobile phone in the two countries. It implies how a new technology seeps into the countries with different level of economic status and competitive market environment. The mobile phone service started in the two countries in early 1990s, and the expansion of mobile phone market drastically increased and outnumbered the line teledensity by the year 2000.

The South Korean telecoms service industry became one of the most vibrant in the world in terms of the scale of market and infrastructure. In the case of the Philippines, the telephone penetration rate increased, and, noticeably, the market reform attracted a huge amount of foreign investment in the construction of basic infrastructure. The market efficiency has improved given the increase of revenue and contribution in the national economy in different ways. However, with regard to the universal service, the effect of market liberalization was not prominent. In the case of Korea, such issue was already resolved under the state-controlled monopoly market structure. For the Philippines, although the market liberalization policy expanded drastically the network availability, the subscription level and regional discrepancies did not improve as expected.

As shown in Table IV, the telecoms market structures in both countries experienced sweeping changes after the implementation of market liberalization policies. However, the competition environment among the market players and the proper regulatory power to handle any possible conflicts differ in the two countries. The M&A issues after the initial market liberalization attracted a lot of attention and concerns with regard to the emerging new market structure. As one of the socioeconomic issues in both countries, the concentration of the telecoms service industry to a small number of traditional business elites appeared to be a complicated issue between the increasing social welfare preferences under democratic society and the improving competitiveness under the globalized market environment. It implies that market liberalization policy is not a sufficient

Table 3. **Telecommunications Service Industries, Korea and the Philippines 1990s.**

	Year	1990	1991	1992	1993	1994	1995	1996	1997	1998*	1999
GDP per capita (US $)											
	Korea	5,917	6,772	6,995	7,461	8,490	10,848	11,422	10,360	6,829	8,685
	Philippines	730	730	831	832	957	1,080	1,182	1,137	898	1,030
Telecommunications service revenue (Million US $)											
	Korea	5,074	6,118	6,600	7,332	8,241	10,623	14,066	13,574	10,914	15,765
	Philippines	584	673	796	867	1,079	1,295	1,556	1,904	1,771	1,595
Main telephone line per 100 inhabitants											
	Korea	31.0	33.6	35.4	37.4	39.3	41.2	43.0	44.4	43.3	43.8
	Philippines	1.0	1.0	1.0	1.3	1.7	2.1	2.6	2.9	3.4	3.9
Cellular subscribers per 100 inhabitants											
	Korea	0.2	0.4	0.6	1.1	2.1	3.6	7.0	15.0	30.2	50.0
	Philippines		0.1	0.1	0.2	0.3	0.7	1.4	1.9	2.4	3.8

Note: * The fallen figures in this year reflected the regional economic crisis started from 1997.
Source: *ITU Yearbook of Statistics*, 2001

Table 4. **Changes in Telecoms Service Market Structures after Market Liberalization, Korea and the Philippines**

	South Korea		The Philippines	
Service Area	Before ML (1990)	After ML (June 2001)	Before ML (1993)	After ML (2000)
Local Exchange Carriers	1 (KT)	2 (KT, Hanaro)	49 (De facto monopoly by PLDT*)	76 (10 major players)
Inter-exchange Carriers	1 (KT)	3 (KT, DACOM, Onse Telecom)	1 (PLDT)	11
International Carriers	1 (KT)	3 (KT, DACOM, Onse Telecom)	3 (Until 1989, PLDT alone)	11
Cellular Mobile Telephone System	1 (Korea Mobile Telecom)	5 (SK Telecom, Shinsegi, KTF, KTM.Com, LG Telecom)	2 (Piltel, Extelcom)	5 (Smart, Globe, Islacom, Piltel, Extelcom)
Paging System	1 (Korea Mobile Telecom)	11	6	15
Trunked Radio System (TRS)	1 (Korea Mobile Telecom)	7	8	10
Record Carriers	1 (DACOM)	257 (Wireless, Leased Line, Special Comm.)	10	11

Note: * Before the market liberalization of 1993, PLDT controlled about 94 percent of all telephone business in the Philippines

condition to bring about a competitive market situation, but a simple necessary condition for it. Thus, a strong regulatory authority should be present in order to build a genuine competitive market structure. In this regard, Melody concluded that despite a definite shift toward an increased role for market forces, the primary influence upon future developments would not be the "invisible hand" of the competitive market, but rather the "more visible hands" of government and industry crafting policy and regulatory decisions.[38]

The review of the two country cases revealed that the motives behind domestic market liberalization did not spring from the size of the local market or from the technological level attained by the industry. The two countries had different market situations and technological levels in the telecoms industry. In spite of these differences, the wave of liberalization in the telecoms market came to the two countries at a similar period. The motives for market liberalization came from both external factors and internal political dynamics in varying degrees. Although differences in the

level of pressure from the external factors existed, the popular and widely accepted trend towards neo-liberalism cushioned any differences, resulting in similar effects in the two countries. South Korea and the Philippines experienced fast growth in the telecoms service industry after market liberalization. This simply proved that competitive market was effective in stimulating market growth. On the other hand, the role of the state remain in order to protect consumers and to enhance the telecoms service situation for the segments of the society to which the market forces by itself could not reach. Such role of the state was more imperative in the Philippines in which expansion of universal service was still a major concern.

Dealing with the telecoms market liberalization in TWCs where the market is not mature enough to stand alone, it is instructive to take a closer look at the socio-political contexts to correctly understand what it is and what it ought to be. Although many studies on telecoms market liberalization did not go much beyond the conventional argument of market efficiency, there have been some effort to underscore the normative direction of telecoms market liberalization.[39] The propositions of these studies go beyond the simplistic dichotomous policy of "competitive markets" and "public service monopolies." They agree that "what is needed is a more in-depth analysis of the institutional structures that are most likely to serve best the twin objectives of economic efficiency and a universal public service under current and future technological, economic, social, and cultural conditions." If the study of the telecoms market liberalization chiefly focuses on the economic efficiency based on market figures, it might produce a biased perception on the issue. To strengthen the field of telecoms study, future research should give the same weight to context-based political economic studies, which could see economic development from a normative perspective in terms of social justice and equality, both domestically and internationally. ❁

Endnotes

1 Abrenica 1999b.

2 Abrenica 1999b:169.

3 Gilpin 1987:26-31.

4 Cowhey 1990; Laffont and Tirole 2000; Mody, Bauer, and Straubhaar, 1995; Sussman and Lent 1991; Petrazzini 1996; Wallsten 1999.

5 Cowhey 1990; Straubhaar 1995.
6 Boafo 1991; Bruce, Kessides and Kneifel 1999; Esfahani 1994; Harris and Kraft 1997; Petrazzini 1996; Ruhle 1999; Spiller and Cardilli 1997; Wallsten 1999; Waverman and Sirel 1997; Yan and Pitt 1999.
7 Mody and Tsui 1995; Sussman and Lent 1991.
8 Stated by Rep. Jeong-Hun Jeong in the Transportation and Communication Committee Meeting, the 145th National Assembly Session, 2 March 1989.
9 Answer from the Minister of MPC, the 145th National Assembly Session, 2 March 1989.
10 Choi 1995.
11 Cho, et al. 1995 and Choi 1995.
12 Cho 1995 and Jang 1996.
13 Yoo and Lee 1997.
14 Cho, et al. 1995: 28.
15 Jang 1996.
16 Jang 1996: 113.
17 ITU 1994.
18 Korea Telecom, "Telecommunications History." At *http://kt.co.kr/museum/picture/5-1.htm*.
19 APEC 1998: 5.
20 Abrenica 1999a.
21 Abrenica 1999a: 5.
22 1987 Philippine Constitution, Article 12, section 19.
23 Lee and Lie 1997.
24 NTC 1980: 13-21.
25 Connally 1999.
26 Reyes 2001.
27 Krairit 2001: 129.
28 APEC 1998: 9.
29 Abrenica 1999a: 3.
30 APEC 1998: 10-11.
31 Edgardo Cabarios, personal interview, 25 April 2002.
32 INQ7 News. *http://www.pworld.net.ph/users/r/roytan/whatsnew/cojuanco.htm*.
33 Abrenica 1999a: 11.
34 Abrenica 1999a: 13-14.
35 Atty. Fernando M. Sobierina III, personal interview, 3 May 2002.
36 INQ7 News. *http://www.agilephil.org.ph/NIService/inq_PR22b_NTC_p2.htm*.
37 Globe Telecom and Bayantel executive officers, personal interview, 10 May 2002.
38 Melody 1991: 38-39.
39 Bortz 1981; Melody 1991; Mody, Bauer and Straubhar 1995; Townsend 1994.

References

Abrenica, Ma. Joy V. *Reforming the Telecommunications Industry: Prospects and Challenges*. Economic Policy Agenda Series 3. Quezon City: Foundation for Economic Freedom, Inc., 1999a.

_____. "Technological Convergence and Competition: The Telecommunications Industry." In *Studies in Governance and Regulation: the Philippines*, pp. 166-185. Eds. D.B. Canlas and S.Fujisaki. Chiba Chi: Institute of Developing Economies, 1999b.

APEC Secretariat. *The Impact of Liberalization: Communicating with APEC Communities: Telecommunications Industry in the Philippines*. Alexsander Point Singapore: APEC Secretariat, 1998. At http://www.arts.monash.edu.au/ausapec/cacphil.pdf.

Boafo, S.T. Kwame "Communication Technology and Dependent Development in Sub-Saharan Africa." In *Transnational Communications, Wiring the Third World*, pp. 103-124. Eds. Gerald Sussman and John A. Lent: Newbury Park, London: Sage Publications, 1991.

Bortz, Paul I. "A Corporate Perspective on Telecommunications Policy." In *Telecommunications and Productivity*. Ed. Mitchell L Moss. Massachusetts: Addison-Wesley Publishing Company, 1981.

Bruce, Robert, Kessides, Ioannis, and Kneifel, Lothar "Overcoming Obstacles to Liberalization of the Telecom Sector in Estonia, Poland, the Czech Republic, Slovenia, and Hungary: An overview of key policy concerns and potential initiatives to facilitate the transition process." *World Bank Technical Paper 440*. Washington, D.C.: The World Bank, 1999.

Cho, Shin, Choi, Sun-Kyu, and Kim, Yong-Kyu "Telecommunication Market Structure Under Globalization Era." *Research Report 95-3*, KwaCheon City: Korea Information Society Development Institute, 1995. (In Korean).

Choi, Sun-Kyu "After Four Years of Applying Competition in Basic Telecommunication Market: An Evaluation and Prospect of Structural Policy on Telecommunication Market." Korea Information Society Development Institute, 1995. At http://www.kisdi.re.kr. (In Korean).

Connally, Bree "Information Technology in the Philippines." 1999. At http://www.georgetown.edu/users/connallb/INITEB/telecom.html.

Cowhey, Peter F. "The International Telecommunications Regime: the Political Roots of Regimes for High Technology." *International Organization* 44, 2 (1990): 169-199.

Esfahani, Hadi Salehi "Regulations, Institutions, and Economic Performance, The Political Economy of the Philippines' Telecommunications Sector." *Policy Research Working Paper 1294*. Washington, DC: The World Bank, 1994.

Gilpin, Robert *The Political Economy of International Relations*. Princeton, New Jersey: Princeton University Press, 1987.

Harris, Robert G., and Kraft, C. Jeffrey "Meddling Through: Regulating Local Telephone Competition in the United States." *Journal of Economic Perspectives* 11, 4 (1997): 93-112.

International Telecommunication Union. *World Telecommunications Development Report 1994*. Geneva: International Telecommunication Union, 1994.

Jang, Young-Dal "Telecommunications Market Opening and Its Policy Direction." Policy Document. 1996 National Assembly Regular Session, 1996. (In Korean).

Jeong, Jeong-Hun. Statement in the Transportation and Communication Committee Meeting, the 145th National Assembly Session, 2 March 1989. *Minutes of the Commission on Transportation and Communication*, 1989. (In Korean)

Kim, Myung-Jun "Convergence Policy in South Korea: The Role of Stakeholders." In *Electronic Communication Convergence, Policy Challenge in Asia*. Eds. Mark Hukill, Ryota Ono and Chandrasekhar Vallath. New Delhi: Sage Publications, 2000.

Krairit, Donyaprueth "Liberalizing Development: Effects of Telecommunication Liberalization in Thailand and the Philippines." Ph.D. Dissertation. Massachusetts Institute of Technology, 2001.

Korea Telecom. "Telecommunications History." At *http://kt.co.kr/museum/picture/5-1.htm*. (Korean)

Laffont, Jean-Jacques and Tirole, Jean. *Competition in Telecommunications*. Cambridge, Massachusetts: The MIT Press, 2000.

Lee, Myung-Ho and Lie, Han-Young "WTO Negotiations on Basic Telecommunications and Future Course of Korea's Information and Telecommunications Industry." Korea Information Society Development Institute, 1997. At http://www.kisdi.re.kr.

Lent, John A. "Telematics in Malaysia: Room at the Top for a Selected Few." *Transnational Communications, Wiring the Third World*, pp. 165-199. Eds. Gerald Sussman and John A. Lent. Newbury Park, London: Sage Publications, 1991

Melody, William H. "The Information Society: The Transnational Economic Context and Its Implications." In *Transnational Communications, Wiring the Third World*, pp. 27-41. Eds. Gerald Sussman and John A. Lent. Newbury Park, London: Sage Publications, 1991

Mody, Bella, Bauer, Johannes M. and Straubhaar, Joseph D. "Preface." In *Telecommunications Politics, Ownership and Control of the Information Highway in Developing Countries*, pp. xv-xxviii. Eds. Mody, Bella, Bauer, Johannes M. and Straubhaar, Joseph D. Mahwah, New Jersey: Lawrence Erlbaum Associates, Publishers, 1995.

_____and Tsui, Lai-Si. "The Changing Role of the State." In *Telecommunications Politics, Ownership and Control of the Information Highway in Developing Countries*, pp. 179-198. Eds. Bella Mody, Johannes M. Bauer, and Joseph D. Mahwah Straubhaar. New Jersey: Lawrence Erlbaum Associates, Publishers, 1995.

National Telecommunications Commission *Philippine Electronics and Telecommunications Industry Yearbook 1980*. Manila: Government Printing Office, 1980.

Petrazzini, Ben *Global Telecom Talks, A Trillion Dollar Deal*. Washington, DC: Institute for International Economics, 1996.

Reyes, Mary Ann L. "Philippine Telecoms: A Bad Connection." 2001. At http://www.atimes.com/reports/CG10Ai01.html.

Ruhle, Ernst-Olav "161 Days of Full Competition – Some Observations from the German Market." In *The Future of the Telecommunications Industry: Forecasting and Demand Analysis*, pp. 217-248. Eds. David G. Loomis and Lester D. Taylor. Boston: Kluwer Academic Publishers, 1999.

Spiller, Pablo T. and Cardilli, Carlo G. "The Frontier of Telecommunications Deregulation: Small Countries Leading the Pack." *Journal of Economic Perspectives* 11, 4 (1997) : 127-138.

Straubhaar, Joseph D. "From PTT to Private: Liberalization and Privatization in Eastern Europe and the Third World." In *Telecommunications Politics, Ownership and Control of the Information Highway in Developing Countries*, pp. 3-30. Eds. Bella Mody, Johannes M. Bauer and Joseph D. Straubhaar. Mahwah, New Jersey: Lawrence Erlbaum Associates, Publishers, 1995.

Sussman, Gerald. "Telecommunications for Transnational Integration: The World Bank in the Philippines." In *Transnational Communications, Wiring the Third World*, pp. 42-65. Eds. Gerald Sussman, and John A. Lent. Newbury Park, London: Sage Publications, 1991a.

_____ and Lent, John A. "Introduction: Critical Perspectives on Communication and Third World Development." In *Transnational Communications, Wiring the Third World*, pp. 1-26. Eds. Gerald Sussman and John A. Lent. Newbury Park, London: Sage Publications, 1991.

Townsend, David N. "The Vital Role of Regulation in the Telecommunications Sector." In *Implementing Reforms in the Telecommunications Sector, Lessons from Experience*, pp. 505-509. Eds. Bjorn Wellenius and Peter A. Stern. Washington, DC: The World Bank, 1994.

Wallsten, Scott J. "Competition, Privatization, and Regulation in Telecommunications Markets in Developing Counties: An econometric analysis of reforms in Africa and Latin America." *Policy Research Working Paper*. Washington, DC: The World Bank, 1999.

Waverman, Leonard and Sirel, Esen "European Telecommunications Markets on the Verge of Full Liberalization." *Journal of Economic Perspectives* 11, 4 (1997): 113-126.

Yan, Xu and Pitt, Douglas C. "Competition in the Chinese Cellular Market: Promise and Problematic." In *The Future of the Telecommunications Industry: Forecasting and Demand Analysis*, pp. 249-264. Eds. David G. Loomis and Lester D. Taylor. Boston: Kluwer Academic Publishers, 1999.

Yoo, Seong-Min and Lee, Sung-Soon. "Evolution of Industrial Organization and Policy Response in Korea: 1945-1995." In *The Korean Economy 1945-1995: Performance and Vision for the 21st Century*, pp. 426-467. Eds. Dong-Se Cha, Kwang-Suk Kim and Dwight H. Perkins. Seoul: Korea Development Institute, 1997.