Examining the Impact of Public Policy on the Development of Mobile Market - the Case of Vietnam
公共政策のモバイル市場発展に対するインパクト分析—ベトナム事例

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ACRONYM AND ABBREVIATIONS

AMPS  Asymmetric Digital Subscriber Line
AT&T  American Telephone and Telegraph
CAD   Competition Administration Department
CC    Vietnam Competition Council
CDMA  Code Division Multiple Access
EVN   Vietnam Electric Corporation
FCC   US Federal Communications Commission
GPC   Vietnam Telecommunications Services Company
GSM   Global System for Mobile Communications
ITU   International Telecommunications Union
MOT   Vietnam Ministry of Trade
MPT   Vietnam Ministry of Posts and Telematics
NA    Vietnam National Assembly
NTT   Nippon Telephone and Telegraph
OECD  Organisation for Economic Co-operation Development
SPT   Saigon Posts and Telecommunications Corporation
US    The United State
Viettel Vietnam Military Electronic and Telecommunications Corporation
VMS   Vietnam Mobile Services Company
VND   Vietnamese dong
VNPT  Vietnam Posts and Telecommunications Corporation (or Group)
WB    the World Bank
WTO   the World Trade Organization
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Chapter 1. INTRODUCTION

1.1 Public Policy

1.1.1 Public Policy Concept

Public policy is a political concept and so far, there is no unique definition of public policy readily available worldwide. Jenkins (1978) argued that public policy is “a set of interrelated decisions taken by a political actor or group of actors concerning the selection of goals and the means of achieving them within a specified situation where those decisions should, in principle, be within the power of those actors to achieve”. Meanwhile, Kilpatrick (unknown date) suggested that “public policy can be generally defined as a system of laws, regulatory measures, courses of action, and funding priorities concerning a given topic promulgated by a governmental entity or its representatives”. When addressing public policy issue, Birkland (2001, pp. 20) advanced the position that while there is not consensus on the definition of public policy, various definitions of public policy do contain the following elements:

- “Policy is made in the name of the "public";
- Policy is generally made or initiated by government;
- Policy is interpreted and implemented by public and private actors;
- Policy is what the government intends to do;
- Policy is what the government chooses not to do.” (Birkland, 2001, pp.20)

Briefly, public policy is interpreted as a grouping of laws and regulations made in the name of the public and sets forth what the state wants or does not want to do. After being enacted, public policy is implemented by both public and private players; public players are governmental agencies and public entities in specific cases and private actors are understood to be private companies and individuals.
Public policy process includes two phases of activities: policy making and policy implementing; each of these activities is undertaken by a different group of main players as analyzed below.

1.1.2 Policy Making

Even though there is no consensus on the definition of public policy, most scholars agree that public policy is initiated or made by the government. But policy is not only created by legislators and bureaucrats – a forefront of the policy making process. In fact, policy is the result of efforts exerted by numerous groups of people and social forces; it is a combination of initiatives pursued by legislators, administrative agencies – who then will be in charge of implementing such policy – and by business sectors and consumer groups as well.

Legislators have to screen a significant amount of bills and resolutions, debate them and finally vote for them to become laws if they are determined to be reasonable. Meanwhile, legislative parties serve as a powerful organizing force in policy making, especially in countries where legislators always vote with other members of their party. In countries that pursue a parliamentary system of government, members of the major party actually become cabinet members and are in charge of running the government; therefore the prospective of being a member of the cabinet is sufficiently attractive that party leaders can use it to persuade legislators to advance the party program. When a prime minister and the senior cabinet members have debated a policy and reached a conclusion, which has been partly set by what they think their colleagues in the party will accept, the actual parliamentary vote is close to a formality. Even in presidential systems, party leaders can win a certain level of authority via their power to offer reciprocal favors (Lindblom & Woodhouse, 1993, pp.51).

However, it is not simply that legislators set forth policy and administrative agencies act as pure messengers and implementers. In fact, administrators join in
modifying or setting policy in order to implement the policy once it is voted. Further, legislators understand that they can neither draft a law that covers all possible cases, nor agree on all specifics, nor adopt indistinct language to achieve total compromise among them. As a result, many legislative acts contain general rules to govern related issues and subsequently such rules require interpretation and clarification by administrative guidelines. In several countries, administrators are even in charge of drafting bills of laws and submitting those bills to the legislators for reviewing and voting. Administrators then are not only implementers, but they are also participants in the policy making process.

The business sector is another interested party in policy making because they are visible in everyone's daily life: they provide goods and services, create jobs and pay wages; in general, they perform the various economic functions of the society. But such performance can only be well undertaken when public policy supports additional investments and promotes a business environment that is favorable to profitable activities within the sector. The business sector, thus, is awarded a position in policy making; its proposals and requirements are considered and adopted at numerous policy making levels.

Consumers play a limited role in policy making. They exercise their power by voting with money when they decide to buy or not to buy goods/services offered by business enterprises. They can not decide the business plans of enterprises individually or on a small group scale, but they may affect costs and product volumes and, thereby, indirectly affect the business and policy making processes. This is especially true when consumers gather their collective efforts via a consumer association to protect their rights; the impact of consumers on the public policy process can be significant. The diagram below presents the various groupings of participants that are involved in the policy making process.
1.1.2 Policy Implementing

Once policy is voted and becomes a law or a resolution, administrators, businesses and consumers are in charge of implementing such law/resolution. Implementation can be undertaken via various mechanisms. Administrators – based on the stipulations in laws – will enact guidance and regulations on related issues or make relevant decisions rooted in such legal basis. In turn, the business sector and consumers are the entities that are being influenced by the policy implementing process as demonstrated in Diagram 1-2.

*Source: author*
Policy implementation is a key feature of the policy process, and learning from implementation successes and failures can be helpful to policy makers in their effort to design even more effective policy.

1.2 Public Policy in Telecommunications Services Provisioning

Together with the info-communications, technological changes during the past two decades, policy that affected telecommunications services provisioning has also changed dramatically; competition is being increasingly emphasized on all continents and privatization and institutional reform have become key elements of the telecommunications agenda in many countries. These three policies have a correlated relationship with each other and the success of one of these policies is strongly affected by the implementation of the others.

1.2.1 Competition Policy Initiated from 1982

A firm is considered a monopoly if it can willingly exert control over the prices or the supply in a specific market. There are three main characteristics of monopoly: first,
only one seller exists; second, no close substitute for the product or service that is provided by the only seller; third, the only seller controls the output of the whole industry and the price to provide product/service is completely controlled by either the seller, or the government.

While monopoly describes market share and market power, natural monopoly aims at demonstrating a firm’s cost structure (relation between fixed cost and marginal costs). Natural monopoly is defined as unsuitable for competition due to economies of scale of the industries (Ely, 1937) which is an economic term that refers to the phenomenon “where the average cost per unit of output decreases while the output being produced by a firm is increased” (OECD, 1989, pp. 39). All industries have cost associated with entering them. Cost can be classified as fixed and variable cost. Fixed cost does not vary with the amount of products/services produced, such as property rent or license fee. Contrarily, variable cost varies with the amount produced, such as cost for materials and labor. Total cost is the sum of fixed and variable cost, while the average “cost is the equation of total cost divided by total output, and marginal cost (which are grouped to variable cost) is the incremental to total cost that results from producing one more unit of output” (OECD, 1989).

In non-natural monopoly industries, the fixed cost is not very high while marginal cost decreases at first when volume of products increases, then increases again as the volume continues growing. A natural monopoly industry has a very different cost structure: it has high fixed cost for a product that does not depend on output, but its marginal cost is roughly constant, small and less than average cost.
Total Cost = Fixed Cost + Variable Cost

Marginal Cost = Total Cost (n+1) – Total Cost (n)

Natural Monopoly  high  ≈ (constant & small) < average cost

A market is considered a natural monopoly if there is a belief that market’s demand can be most effectively and efficiently satisfied by a single firm rather than by multiple firms, since fixed cost needed to provide such product/service is considerably high, while the cost to provide one more unit is less than average cost. Unlike the case of a monopoly where only a single firm operates, in natural monopoly, “competition may exist for a time but only until bankruptcy or merger leaves the field to one firm; in a meaningful sense, competition here is self-destructive” (Kaysen & Turner, 1959, pp.191).

In telecommunications services provisioning, a natural monopoly was believed to be a must, due to its “economies of density” (Armstrong, 1997, pp. 66), when the cost to build a network was less by a single company due to the technology restraints. The cost to install cables, transmitters and switches was typical high, when a single cable could satisfy all telecommunications capacity demands. As a result, telecommunications services were preserved under the exclusive provisioning of a single entity worldwide until early 1980s. When telecommunications services provisioning was operated under a natural monopoly regime, government interventions were needed to protect consumers from the abusive behavior of the single provisioning firm. These interventions were mainly undertaken in two ways: the first way was to establish a government agency to regulate all behavior of the firm, such as the case of the United States, when the natural monopoly provider – AT&T (American Telephone and Telegraph) was always a private company and the FCC (Federal Communications Commission) regulated AT&T behavior based on the Communications Act 1934, and the second way was to maintain public ownership of the single telecommunications operator and, instead of regulating the natural monopoly firm's behavior, the government simply took it over and set itself...
behavioral limits. This second way was applied broadly worldwide, such as the case of Japan and most European countries.

During the end of 1970s and early 1980s, technological developments reduced the economies of density in telecommunications and led to “a sharp decline in costs and the possibility to by-pass the fixed-link network …, this suggests that many of the natural monopolies … have disappeared” (OECD, 2001, pp.103). The emergence of new telecommunications technologies, for example optical fiber cable, reduced fixed cost rapidly. Consequently, numerous telecommunications natural monopolies were broken up and competition was introduced in telecommunications; firstly, in the United States by the government-mandated divestiture of AT&T in 1982\(^1\). In the same year in the United Kingdom, Mercury Corporation was granted an operating license to become the second telecommunications operator in that country. Nowadays, competition is realized in almost all telecommunications sub-markets and the number of countries that have adopted a competition policy has increased significantly. Interestingly, as of 2004, mobile services were provided in a competitive environment in 142 countries as shown in Figure 1-1 below.

**Figure 1-1. Level of Competition in Telecommunications Market Worldwide, 2004**

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\(^1\) This divestiture became effective on January 1, 1984 and AT&T was split to seven independent regional Bell companies, commonly refer to as Baby Bells
Once competition policy is approved, it is difficult to balance the application of regulation, i.e. either too little or too much, within the new competitive market: competition policy must be implemented and ensured by competent authorities based on the applicable laws and regulations. It thus calls for institutional reform in telecommunications: legislation on telecommunications must be enacted and/or deregulated; and telecommunications regulator and/or the competition agency must be established or strengthened.

In the natural monopoly period, the government set forth strict laws and regulations to govern all behavior of the single operator in case that operator was privately owned. This case could be evidenced in the United States before 1984 where AT&T was a privately owned natural monopoly firm. Subsequently, the U.S government regulated AT&T activities mainly via the FCC, and subject to Communications Act 1934; and the Federal Court and the anti-trust laws. In many other countries, governments controlled the single operator by taking over the operator and operating as the single ownership of that public entity, such was the case in the United Kingdom before 1984, when British Telecom was a public entity, the telecommunications act was
not required and the telecommunications regulator was not existent. In a telecommunications competitive environment, new rules that allow participation by new operators must be released and restrictions that applied to the used-to-be-single-operator environment must be removed, reduced or simplified, and a transparent and predictable telecommunications legal framework must be created to initiate and ensure market competition.

On the other hand, competent authorities that are in charge of implementing the enacted laws and regulations must be created in countries where such an agency did not exist and the single operator used to be a public company, or its roles must be strengthened where such an agency already existed. There are two competent agencies that are authorized to initiate and facilitate market competition: telecommunications regulator and competition agency. Telecommunications regulator refers to either the independent regulator that is responsible for implementing and administering the telecommunications legal framework, or the line-ministry that is responsible for creating such a framework if there is no independent regulator. Alternatively, it refers to both organizations where the regulatory functions are shared between the two of them. The telecommunications regulator governs the market derived from sector-specific laws to form and encourage competition among operators. Its pro-competitive activities are initiated by granting licensing to new operators; it then ensures the continued existence of such operators via various regulations and decisions on, for example, interconnection, scarce resources and tariff. The role of telecommunications regulator, therefore, emerges as *ex ante*. On the contrary, the function of a competition agency engaged in monitoring and maintaining competition is *ex post*. A competition agency executes its duties anchored in general competition laws to protect competition that has already been established, focuses on anti-competitive behaviors, investigates alleged anti-competitive cases and adjudicates the issues.

It is not binding for a country to have both a telecommunications regulator and a competition agency to ensure telecommunications competition. Some countries do not have a telecommunications regulator, such as the case of New Zealand, where a
telecommunications regulator does not exist and competition is regulated by the Commerce Commission. Other countries did not create a competition agency for a significant period of time; for example, the Competition Council was just established in Vietnam in 2006. In many countries, telecommunications competition is protected and advanced by both the telecommunications regulator and the competition agency. According to ITU (International Telecommunications Union) database, a separate telecommunications regulator was available in 119 countries as of 2004. Meanwhile, 87 countries have established a competition agency to implement competition law and ensure fair competition in their markets (Global Competition Forum, accessed on 30 January 2007). Further, since telecommunications has often been considered a public utility and operated under a natural monopoly mechanism, telecommunications policy making, regulatory and operational functions have been carried out by a single entity in most countries. Consequently, the telecommunications regulator had, or still maintains, a close relationship with the incumbent service provider, who previously functioned on a collaborative basis within the same organizational structure with them. Moreover, if the incumbent operated under natural monopoly as a public entity, it may continue to retain influential connections to the government. In such a scenario, only an independent regulatory body can ensure fair competition among multiple operators.

An “independent regulator” – as defined in the WTO Telecommunications Reference Paper – is a body that is “separate from, and not accountable to, any supplier of basic telecommunications services. The decisions of and the procedures used by regulators shall be impartial with respect to all market participants.” (WTO, 1996). When addressing the attributes of an independent telecommunications regulator, Tarjanne (1999) also simply emphasized the separation between the regulator and its regulated industries. Later, Invent (2000) and Wu (2005) further expanded the definition of an independent regulator; they concluded that independence increases when the regulator is insulated from both political and operational pressures. Additionally, they presented a set

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2 The detail information on separate telecommunications regulators are accessible at the http://www.itu.int/ITU-D/ICTEYE/Regulators/Regulators.aspx
3 Information on the Competition Agencies worldwide is accessible at http://www.globalcompetitionforum.org/EnforcementAgencies.htm
of indicators to evaluate the regulator’s independence based on the relationship between the regulator and other state agencies, regulated industries and its attitudes toward users. Further, Invent and Wu expressed that independence can be achieved when a fair decision making process is available and affected and interested parties have a chance to comment upon the drafts of regulatory rules and decisions. They used two primary indicators – public hearings and availability of regulatory developments on a regulatory website – to evaluate the fairness of the decision making process. However, regulatory decisions are not limited to the issuance of rules, regulations and decisions, but they are also extended to the application of such rules and regulations to govern the market. In its submitted document to the WTO (WTO, 1999), the United States pointed out that independence can be attained when a predictable, fair, and legal regulatory framework is developed to ensure that the same rules apply to everyone consistently and that the regulator can not employ its own subjective point of view in making a decision and deny that the necessary rules are absent. Moreover, the author believes that in order to achieve independence, the regulatory decision-makers must be qualified and experienced in utilizing various rules and regulations in making decisions that will affect the public. Diagram 1-3, below, illustrates relevant indicators to measure the independence of a regulator in governing the mobile telecommunications market.
Competition policy directly influences two groups of businesses: the incumbent service provider, who used to be the single operator during the natural monopoly period, and all other operators that are allowed to provide telecommunications services after the market is opened for competition. Consumers play a minor role in this process and they can actually benefit from competition as described in Diagram 1-4.
1.2.3. Privatization, Started from 1984

In order to increase efficiency of telecommunications services provisioning, privatizing telecommunications operators also commenced in the early 1980s. “Privatization refers to the transfer of ownership and control of a government or state asset, firm and operation to the private sector. The subject transfer can take the form of issue and sale, or the outright distribution of shares of the firm to the general public. Broadly used, the term privatization includes other policies such as “contracting out”, the process by which activities, while publicly organized and financed, are carried out by private sector companies” (OECD, 1989, pp. 69). Privatization is pursued to resolve problems of poor performance by public utilities, to improve services’ quality, to reduce prices and to contribute capital sources to the governmental budget. Since privatization is a process by which state ownership, or control, can be transferred to the private sector, the process can be affected via 2 separate methods.
Firstly, it can be introduced by signing an outsourcing contract to delegate parts of the public firm’s activities to the private sector. This outsourcing contract may help to increase efficiency of the public firm, reduce operational costs and utilize external labor skills and resources, while government still maintains the exclusive rights of ownership of the firm.

Secondly, privatization can be completed by selling partial or full equity shares of the public firm to the private sector. The process of selling state equity shares in state-owned entities can be undertaken pursuant to three different scenarios worldwide:

- Selling equity shares on the stock exchange markets by setting an Initial Public Offering (IPO). The state decides the percentage and value of the shares it desires to sell, then an auction process is opened publicly and the auction winners become entity owners of the subject company. This method is the most commonly used worldwide, when state governments decide to privatize their own property;

- Another type of selling state equity shares, named “Asset Sale Privatization,” was employed by Germany during the early 1990s, where the resulting government privatized state-owned firms that were previously operated by the former socialist government of East Germany. This method was effected by selling the entire state-owned firm, or part of it, to a strategic investor, usually by auction;

- During the early 1990s, transition economies in Central and Eastern Europe used a different kind of privatization when transferring state-ownership to the private sector. The method is called “Voucher Privatization,” as described by Ellerman about voucher privatization in Eastern Europe “in voucher privatization, vouchers or coupons to buy assets being privatized are distributed for free (or for a nominal processing fee) to all citizens. The distribution might be equal amongst all citizens, or may take into account their respective ages or years in the workforce. The vouchers may or may not have a fixed face value or be tradable between citizens. Often intermediaries and voucher investment funds were promoted to purchase shares from citizens, which, in turn, were used to buy
portfolio shares in companies that were being auctioned by the government” (Ellerman, 2001).

As a result of the technological advancements during early 1980s, natural monopoly status in telecommunications was dissolved as analyzed above and the issue of maintaining the used-to-be single telecommunications operator as a public entity was debatable. Once telecommunications services provisioning could no longer be treated as a public utility, it was not economically efficiency to retain the state-owned status of the telecommunications incumbent operator. As a result in 1984, telecommunications privatization was commenced in the United Kingdom and Japan, when the respective governments privatized the state-owned monopolists NTT (Nippon Telegraph and Telephone) and BT (British Telecom) based on newly-released legislations. Subsequently, privatization was completed in various countries, such as Chile (1987), Argentina (1990), Mexico (1990), Malaysia (1990), Pakistan (1992), and as of 2004, there were 122 countries among the 187 ITU members that have partially or fully privatized their primary, fixed-line operators as shown in Figure 1-2.

Figure 1-2. Privatization of Main Fixed-line Operators Worldwide, 2004

Source: author produced based on ITU World Telecommunications Regulatory Database
Initiated by the state, privatization directly affects two groups within the telecommunications business sector: the telecommunications operators, who must be privatized, and the investors, who engage in the process by buying the operators’ equity shares and/or contribute capital to further develop, operate and maintain the privatized networks. In their turn, consumers can actively join the process by buying operators’ equity shares and become investors as shown in Diagram 1-3.
1.2.4 Relationship and Sequence among Competition, Institutional Reform and Privatization Policies in Telecommunications

There is no reason to actively carry out institutional reform once a telecommunications monopoly is planned to be retained since the government can either self-control the single public-owned firm, or manage it via its established competent authority, based on applicable law (such as the case of the United State before 1984) since institutional reform may duplicate existing governmental initiatives and the resulting industrial performance may not be improved. On the other hand, competition can not be introduced if institutional reform is not initiated by the government, at least at the level of enacting and revising applicable laws to allow new companies to do business in telecommunications services sector. Competition and institutional reform need to be integral parts of the governmental agenda in order to create a legal basis for competition,
and to provide sufficient legal tools to regulate competitive behavior and ensure the existence of new companies.

Further, since the monopolists and state-owned operators “would typically face poor incentives to reduce costs” (Laffont & Tirole, 2000, pp. 3) and their price structure was severely distorted by cross-subsidy schemes among services, privatizing the incumbent provider is necessary to improve the firm’s efficiency. However, privatization of the single-state monopoly without competition will become a process of transferring from a state monopoly to a private monopoly, where economic rights and benefits may shift from the public sector to the private sector, and “there may not be any gain in efficiency, lower prices or broader services” (Mathew, 2003, pp.5).

There is also a consensus among scholars on the sequence of institutional reform and privatization. In 2002, Wallsten indicated that ignoring institutional reform was a mistake and that institutional reform should be completed prior to privatization. It will help to increase the firm’s value, reduce regulatory risks, create certainty of governmental rules and, consequently, enlarge the attractiveness of the firm to potential investors. This point of view is also shared between Stiglitz (1999), Mathew (2003) and Godoy and Stiglitz (2006).

In brief, competition policy is only well affected when it is supported by the implementation of institutional reform and privatization. Moreover, telecommunications competition should be accompanied by institutional reform, while privatization should be undertaken only after the establishment of a regulatory structure.

1.3. Purpose and Structure of the Dissertation

Aiming at an analysis of the influence of competition, institutional reform and privatization innovations on the development of the mobile services market in Vietnam,
this research is undertaken, based on three hypotheses and divided into 6 chapters, as explained below.

1.3.1 Purpose

The modern telecommunications industry in Vietnam was initially established in 1945 under a decision of the then Communist Party. For decades, the industry was considerably under-developed and exclusively focused on satisfying the communication needs of the government bureaucracy. In 1986, the total number of telephone lines in the country was only 76,000, equivalent to a density of 0.124 per 100 inhabitants (ITU). Since 1986, Vietnam has initiated selective economic reforms by abolishing centrally planned mechanisms, adopting market-based schemes and allowing liberalization and privatization. As a result of this process, the telecommunications sector has experienced significant achievements, especially during the end of 90s and early 2000s. In 2002, Vietnam “was ranked as the second fastest country in the world in terms of telecommunications development growth during the decade 1990 to 2000” (ITU, 2002, pp.16). At the end of 2005, Vietnam had approximately 16 million telephone lines in operation, 57% of which were mobile lines, and it had achieved a density of 19.01 lines per 100 inhabitants (MPT, 2006) as demonstrated in Figure 1-3.
“Mobile services were introduced in Vietnam in 1992, when the first mobile terrestrial network was built in the most populated city – Ho Chi Minh City. After 13 years of development, the number of mobile lines reached slightly more than 9.6 million, surpassed the number of fixed-lines” (Tran Nhat Le and Obi Toshio, 2007) and became a substitute for fixed services in satisfying the inhabitants’ communication needs.

There have been several researches to study the development of telecommunications in Vietnam. However, these researches were either dedicated to the analysis of the Internet sub-market – the first segment that was actually liberalized, or they were focused on the competitiveness within the telecommunications market as a whole. Meanwhile, mobile communications has emerged as the most competitive sub-
market in the country and has attracted immense interests of private investors. Yet in all recorded researches, analyses of the mobile segments expressed rather modest conclusions: they concentrated on regulatory tools to prospectively govern the market, failed to review mobile services provisioning in a broader view and did not concentrate on the major factors that influenced the development of the mobile segment: public policy and two very important elements of mobile services provisioning – spectrum and numbers management. Against this backdrop, the goal of this research is to set forth a comprehensive examination of mobile services provisioning in Vietnam.

Privatization, competition and institutional reform are being applied under different scenarios and initiated at different times, depending on each country’s socio-economic and political institutions. Hence, there is no unique answer that is applicable in all cases to the questions of how and how well each country has dealt with its telecommunications reform issues, why a resolution was selected, how a specific reform succeeded and what were the decisive factors involved. This dissertation, therefore, concentrates on analyzing the effects of competition and privatization on mobile services development in Vietnam and identifies the driving forces that led to the formation of institutional reform.

1.3.2 Research Hypotheses, Methodologies and Approach

Broadly, the introduction of a competition policy and the implementation of institutional reform in Vietnam positively contributed to a strong development of telecommunications as a whole and mobile communications in particular. Privatization was introduced in Vietnam in 1988, initial institutional reform was introduced in 1992 and competition that was initiated in 1995 to facilitate the country’s rollout of mobile network services and to reduce applicable communications tariffs. In order to examine the impact of these innovations on accelerating mobile development in Vietnam, this dissertation is based on the following hypotheses:
1. The introduction of competition plays an essential and positive role in accelerating mobile development;

2. Institutional reform has not been adequately fostered to timely support and ensure competition in the market, hence an independent regulator and a transparent and workable legal framework does not exist to support a successful and effective competition policy; and,

3. Reluctance in further privatizing mobile operators has resulted in negative mobile development outcomes and does not fully support competition.

The following three methodologies were employed to prove the above hypotheses. First, a comparative methodology was used to quantitatively measure the positive role of competition on mobile development. A quantitative comparison was used to compare telecommunications indicators (services diversification, tariff reduction and density improvement) before and after the introduction of competition in Vietnam to confirm the positive influence of this policy. Noting that focusing only on the situation of a single country could lead to an inadequate evaluation of competitive effectiveness, the comparison of mobile development in Vietnam with mobile development in other countries that had similar backgrounds at the starting point but that employed different competition approaches, this dissertation expresses conclusions pertaining to how far and how well competition has affected Vietnam’s mobile development. The countries that have been selected for comparative analysis are China and Russia. These three countries share several similar socio-economic conditions and are considered transition countries that applied different approaches in commencing mobile competition.

In addition to quantitative comparisons among China, Russia and Vietnam on mobile achievements, using quantitative indicators (mobile density, number of subscriptions and amount of absorbed capital), a qualitative comparison also has been undertaken to broadly understand the impact of institutional reform and privatization on mobile development in these countries. As presented above, all public policies are normally initiated by legislators and implemented by different governmental agencies under the form of legal documentations. Thus, comparing the impact of
telecommunications public policy in different countries is synonymous to comparing different legal systems applicable to telecommunications. Noticeably laws and regulations of different countries have dissimilar characteristics since they are intended to reflect social, economic and political concerns of those individual countries, and each country has different specific problems. However, all countries have the same basic concerns and need to resolve their particular local problems, and each country’s specific laws, therefore, have to be crafted in a manner that they express each state’s policies regarding how to address the same fundamental issues. For that reason, functional methodology is the most suitable method for use in undertaking the proposed qualitative comparison (Cruz, 1993, pp.37; Markesinis, 1997, pp.4).

Game theory is the last methodology that this dissertation has relied upon. Game theory is an applied branch of mathematics and economy, firstly introduced in the 17th century by mathematicians, such as Pascal and Fermat. In the modern era, game theory was conducted in a 1913 publication of Ernst Zermelo – a German mathematician. Other academicians that have actively contributed to the development of game theory are John von Neumann – a Hungarian mathematician; Morgenstaern – an Austrian economist; John C. Harsanyi, John F. Nash Jr. and Reinhard Selten – co-recipients of the 1994 Economic Nobel Prize for their pioneering analysis of equilibrium in the theory of non-cooperative games study. Game theory is employed as a methodology to implement researches in various fields, such as economics, management and social science.

It is generally assumed that there are three groups of games: games of skill, games of chance and games of strategy. The game of skill is a one-player game in which the only participating player completely controls all the outcomes. A student who utilizes his knowledge to successfully complete an examination is a typical illustration of game of skill. This kind of game is not purely a game, since the element of interdependence is missing. However, it is still considered a game in the game theory.

The game of chance is a one-player game against nature. Unlike the game of skill, this single player can not completely control the outcome of the game and his strategic
decisions do not lead to predictable outcomes in all cases. The outcomes of the game of chance are partly dependent on the player’s choices and partly dependent on nature – the second player. Deciding whether or not to purchase insurance is an example of the game of chance. The game of chance can be sub-divided into two groupings: 1) a game involving risk, in which the player knows the certainty of nature’s responses and, thus, knows the probability of the outcomes associated with his choices; and 2) a game involving uncertainty, in which the player can not truly predict nature’s responses and, therefore, can not be certain about the outcomes and successes of the selections.

The game of strategy is classified based on different characteristics, such as the number of players, sequence of the game (sequential or non-sequential game), constant sum of the game (zero-sum or non-zero sum game), or number of strategic moves (finite or infinite game) as briefed in Diagram 1-6.

**Diagram 1-4. Game Categorizations**

![Diagram 1-4. Game Categorizations]

*Source: author*
Game theory was employed in this research based on the viewpoint that the mobile market is like a game among different players, where each player tries to maximize their benefit by using different strategies. Since game theory is useful in predicting the optimal choice for each player in a certain context, the use of this methodology can assist in pointing out whether the introduction and implementation of a specific telecommunications policy is a success or failure. It further helps to identify the motives of each player in a specific case and to indicate how successful policy can be achieved.

Outline of research approach, methodologies and hypotheses is illustrated in Diagram 1-5.
1.4. Originality of the Dissertation

There are numerous studies that dwell upon the impacts of competition, privatization, institutional reform and the sequencing of these innovations on telecommunications development. These studies either present the issue on a worldwide basis or concentrate on a small grouping of countries, such as the Organization for Economic Co-operation and Development (OECD), Asian or developing countries. Since there has been no published endeavor to analyze the influence of telecommunications public policy and institutional reform on Vietnam’s mobile development, this dissertation represents an original contribution to the field for the following reasons:
1. The dissertation, for the first time, presents a combined influence of competition, privatization and institutional reform on the mobile development in Vietnam – an issue that has not been previously explored academically.

2. The dissertation, for the first time, compares mobile development in Vietnam with the mobile development in two other countries that are similarly ranked as being transition economies\(^4\), but have chosen either similar or contrasting public policy approaches and thoroughly depicts the impact of the selected public policy on mobile development.

3. The dissertation also provides originality in analyzing Vietnam’s mobile service issues by employing, for the first time, game theory as an analytical methodology to point out the driving forces of the selected resolution and to suggest prospective strategic moves of parties that are participating in Vietnam’s mobile market.

1.5. Structure of the Dissertation

This dissertation consists of 7 chapters as shown in Diagram 1-8.

Chapter 1 clarifies the relevant concepts of public policy in general and telecommunications policies in detail. It also provides a diagram of policy making layers, which can be useful to interest parties in considering how to proceed if they desire to lobby for a particular policy in a specific country. The relationship between the telecommunications law/telecommunications regulator and general competition law/competition agency and their respective positions in the competition process offers a

\(^4\) The transition status of these three countries is mentioned in different researches by the WTO or the World Bank. See, for example, the WTO working paper “Effect of WTO Accession on Policy-making in Sovereign States: Preliminary Lessons from the Recent Experience of Transition Countries” (2002). Available at http://www.wto.org/english/res_e/reser_e/derd200202_e.htm
basic framework to determine the dominance of these laws and agencies in a particular case. A set of indicators to measure the independence of the telecommunications regulator is demonstrated to understand its independence; this set is generally applicable for evaluating the regulator’s independence in any specific country. Also in this chapter, the hypotheses are developed, the research methodologies are classified, and the purpose and originality of the dissertation are set forth and explained.

Chapter 2 provides a review of various researches pertaining to the impact of competition, privatization, institutional reform and the sequencing of these elements on telecommunications development. It reviews the impact of these factors on telecommunications development worldwide and in particular groups of countries, such as OECD’s and Asian. Previous researches on Vietnam’s telecommunications industry are also reviewed in this chapter to examine their conclusions and rationales, as well as the essential aspects of the industry that were not addressed.

Chapter 3 analyzes the formulation, implementation and influence of competition policy on Vietnam’s mobile development. It compares performance outcomes of the mobile markets in three different countries: China, Russia and Vietnam in order to see how competition affects mobile development. This chapter also points out the driving forces of the chosen steps in Vietnam’s competition process.

Chapter 4 focuses on the implementation of institutional reform in Vietnam, how this policy impacted and supported competition in the mobile market. A comparative scenario among China, Russia and Vietnam is also set forth to analyze the correlation between competition and institutional reform to mobile market. Further the respective roles of the responsible authorities in fostering Vietnam’s mobile competition and the deficiencies of the current institution are examined in Chapter 4.

Chapter 5 accounts for privatization that has been applied to mobile services provisioning. Chapter 5 compares the effectiveness of selected privatization approaches
with those chosen by China and Russia and suggests the best strategic moves for different players concerning to privatization process in Vietnam.

Chapter 6 presents learning experiences via the application of public policy innovations in Vietnam and proposes policy recommendations that the State should imply in order to facilitate the mobile market’s development.

Finally, Chapter 7 interprets the research findings and reviews the comparison of such findings with the stated research hypotheses. This comparison delineates whether or not the public policies that are being employed to develop the mobile market in Vietnam are a success or a failure, and it further projects on the ultimate development of mobile services in Vietnam.
Diagram 1-6. Dissertation Structure

- **Concepts:** Public Policy, Competition, Institutional Reform, Privatization and Interest Parties
- **Research Approach:** Purpose, Hypotheses, Methodologies, Originality, Structure of Dissertation
- **Introduction**
- **Literature Review**
- **Competition Policy and Mobile Services Provisioning in Vietnam**
- **Privatization Policy**
- **Conclusion**
- **Roles of competition, privatization, regulatory reform to telecommunications development**
- **Sequence of implementing these innovations in theory**
- **Impacts of the above innovations to telecommunications development in OECD, Asia Pacific countries**
- **Previous researches on Vietnam**
- **Brief information about Vietnam**
- **Formation and implementation of competition policy.**
- **Performance outcome in comparative scenario: before and after introducing competition.**
- **Compares with the competition approaches in China and Russia**
- **Privatization:** application of privatization in Vietnam and driving forces of those selections
- **Limitation of the research and suggestion for the future research**
- **Brief conclusion and discussion on the observed deficiencies**
- **Limitation of the privatization approach**
- **Institutional Reform in Vietnam:** analyze institutional reform to initiate, nurture, facilitate and ensure competition. Evaluate the transparency and predictability of the framework
- **Institutional Reform**
- **Analyze the roles of the telecommunications regulator and the competition administration agency on ensuring fair competition.**
- **Evaluate the independence and neutrality of the telecommunications regulator**
- **Policy Implications and Proposals**
- **Learning Experiences from the Implementation of Public Policy in Vietnam**
- **Policy Proposals to the Vietnam’s government in order to accelerate the mobile market**
Chapter 2. LITERATURE REVIEW

Telephone services were provided for the first time in 1876 by AT&T in the United States and mobile communications were introduced much later, when the first mobile system that enabled subscribers to send and receive messages was operated by AT&T in 1946 (Amendola & Ferraiuolo, 1995). However, mobile services were not deployed on a broad scale until end of the 1970s and early 1980s, when cellular mobile communications were introduced in Japan, Europe and the United States. As recorded by ITU, in 1980 the total mobile subscribers worldwide stood at only 23,482. In 2005, the world had more than 2 billion mobile lines and had reached a worldwide mobile density of more than 33 mobile lines per 100 inhabitants (ITU Telecommunications Development Indicators).

As mobile services deployment began on a broad scale in the early 1980s, the continued provision of telecommunications on a natural monopoly basis was beginning to be considered unsustainable in the future by public policy groups. This policy shift and the economic fact that the costs and time required to build a mobile network were much less than that required to build or expand a fixed-network led to the mobile services markets being opened to competition shortly after their introduction in many countries. In France, mobile services were commercially available in 1987, and in 1989 the services were provided under a competition regime. In Germany, mobile services competition that provided based on GSM (Global System for Mobile Communications) once they were put into operation in 1989. In the United Kingdom, mobile services were initially provided within a competitive environment in 1985 – the year that mobile services were first provided in that country. Moreover, in many countries, besides a mobile license that was granted to the incumbent – who used to be the single telecommunications operator before mobile communications was introduced, other mobile licenses were issued to private-owned companies.
Interestingly, when analyzing impact of competition, privatization and institutional reform on a telecommunications market, almost all scholars have focused on the impact on that telecommunications services market as a whole and have not paid any particular attention to the mobile services market specifically. Consequently, the literature review that is presented in this Chapter examines the previous studies pertaining to the impact of competition, privatization and institutional reform on telecommunications services provisioning in a general context.

The literature Review provided in this Chapter is divided into 3 sub-sections. Firstly, it reviews previous researches on the analytical framework and impact of liberalization, privatization and institutional reform on telecommunications and mobile development worldwide. The second part examines these innovative measures in a number of countries and is categorized as follows: OECD, Asian, African/ Latin American, transitional and developing countries. Lastly, the significant findings of researches pertaining to Vietnam’s telecommunications are presented.

2.1 Impact of Telecommunications Competition, Privatization and Institutional Reform Worldwide

2.1.1 The Necessity of Competition in Telecommunications and How It Can Be to Achieved

In 1997, Bar and Borrus presented their paper on “why competition is necessary in telecommunications and how to achieve it based on the learning experiences from advanced countries” (Bar & Borrus, 1997). They argued that competition serves as a means to facilitate economic growth and sustained innovation and that countries that restrict telecommunications competition may suffer both static and dynamic losses in short-term revenue and long-term innovation and growth.

The static losses are a sacrifice of the short-term economic benefits that competition stimulates. The static losses are reflected in the loss of sale opportunities by
the telecommunications services providers and the accompanying upstream and downstream effects on other suppliers that sell complementary products and services. In all countries in which telecommunications competition has been introduced, incumbents have experienced increased revenues and profits even though their market share was reduced. Once competition was introduced, the prices for services would decrease and lead to the stimulation of more service uses, as well as longer duration usage; as a result, the overall telecommunications pie was expanded. In turn, there are significant upstream impacts on complementary products, such as telecommunications equipment, data and semiconductors. By contrast, the failure to introduce competition could result in the giving-up of all the associated upstream effects: the equipment market would be smaller; there would be fewer local suppliers and less innovation would be spurred. Similarly, the lack of competition in telecommunications services provisioning can also negatively affect sectors that sell downstream products and services, such as software, telemarketing and maintenance services.

Further, in the long-term, countries that fail to introduce competition are very likely to experience dynamic losses. Dynamic losses are the long-term, cumulative handicaps that a domestic economy experiences due to the lack of telecommunications competition. This lack fails to stimulate customer innovations in the use telecommunications in their industrial activities. The lack of telecommunications competition can result in business customers having to pay higher costs for telecommunications needs, restraining them in developing their business activities in more innovative and flexible ways and leading to the overall negative economic impact of the economy.

Bar and Borrus pointed out that competition must be enforced and guaranteed by substantial ongoing assistance from the government because the incumbent has huge advantages of network scale and scope, connectivity and the capability to block competition by controlling interconnection to its network. In such a case, the government has to maintain and facilitate telecommunications competition in 4 different aspects.
First, the government has to make competition possible by allowing access to both local and long-distance networks. Such allowance can be realized by removing restriction of resale the incumbent’s facilities and services and accepting facilities-based competition. Without resale rights, new entrants can not access to the existing network and be unable to terminate or originate calls to the incumbent’s subscribers. Further, if the new entrants could only access to the incumbent’s network and could not build their own network, they would be broadly subject to the potential discriminatory behaviors of the incumbent, therefore, allowing other operators to build alternative networks is a possible way to keep the incumbent from engaging in abusive behavior.

Second, government has to make competition work by adopting non-discriminatory and transparent terms of interconnection and establishing reasonable interconnection charges. Since the incumbent has the network advantages of scale and scope, any discriminatory behavior in setting interconnection terms and conditions on the new entrants would place the new entrants in a disadvantageous position.

Third, the government has to make competition real and effective by allowing foreign participation on the WTO’s (World Trade Organization) terms, because without foreign competition, the advantages of the incumbent tend to be overwhelmingly against domestic competitors.

Lastly, the government has to make competition enforceable by establishing an independent and neutral regulator since the above noted competitive attributes can not become a reality without the availability of a responsible entity with sufficient enforcement power.

2.1.2 Impact of Privatization and Competition on Telecommunications
In 2004, Li and Xu published their research on “The impact of Privatization and Competition on Telecommunications Sector around the World”. Realizing that telecommunications privatization and competition was being increasingly introduced worldwide in the 1990s and that sufficient economic data was available for studying the influence of these trends in telecommunications markets, Li and Xu carried out an investigation of “privatization in 177 countries and competition in 162 countries between 1990 and 2001” (Li and Xu, 2004). In their paper, Li and Xu concentrated on the broader parameter of economic performance rather than on the more narrow parameters of accounting or financial performance. They further included total productivity as a factor to measure that performance. The paper had more significance than previous researches on the same issue, because it covered wider and more updated coverage and used more comprehensive information on the reform and performance measures. Additionally, it combined data from countries with privatized telecommunications operators with that of countries with non-privatized operators, while previous researches only examined the issue in countries with privatized operators. By undertaking their empirical analysis on worldwide basis, Li and Xu sought answers to the following issues:

- “Does full privatization improve the performance of a country’s telecommunications more than partial privatization, which leaves control rights to bureaucrats?

- Is privatization (or competition) alone sufficient in improving economic performance, or are privatization and competition complementary policies?

- How do privatization and competition affect a comprehensive list of performance measures?” (Li and Xu, 2004).

After completing their empirical analysis, Li and Xu concluded that:

- “Privatization and competition had a large positive impact on telecommunications performance and that more reforms were associated with more performance gains.
The increase in competition in both the fixed and mobile lines segments was associated with rising employment, investment, output, tele-densities, labor and total productivities.

- Full privatization, which gave private owners control rights, was much more effective in improving performance than partial privatization, which retained control rights by bureaucrats. After controlling other factors, countries that implemented full privatization moved more aggressively to increase traffic volume and experienced faster growth, network expansion and improvement in both labor and total factor productivities.

- There is evidence of complementary interaction between privatization and competition in increasing network penetration and in curtailing service pricing levels among privatized operators, and optimal public policies can be achieved when both privatization and competition are in place. Countries that instituted only privatization or competition in specific sub-markets, but not in all sub-markets, experienced less economic performance than countries that applied both policies in all telecommunications sectors;” (Li and Xu, 2004)

Further, Li and Xu pointed out benefits and disadvantages that the stakeholders in the privatization and competition process may experience as follows: “Firstly, consumers are likely net winners of the process, when they can benefit from expanded services, improved service quality, more choices and cheaper prices. However, a specific segment of the consumer base is possibly worse off since any cross-subsidies that may have existed prior to the reforms would be decreased or abolished. Secondly, government can benefit from privatization since subsidies are reduced or eliminated, and if privatization is implemented via share-ownership selling, fiscal revenue can be increased. Thirdly, public and private investors can also benefit from privatization and competition since total productivity can be correlated with the economic value added. However, not all investors have financially benefited from privatization because of the overvaluation of telecommunications stocks in the late 1990s and the subsequent market crash. Finally,
not all employees have benefited from the improved economic performance. Some employees have had negative experiences as a result of privatization and competition: they may have lost earnings, their jobs or have had to find out a new position within the company. However, both existing employees who retain their jobs and new hires may well have benefited from higher wages and even stock rights.” (Li and Xu, 2004).

2.1.3 Sequence of Privatization and Institutional Reform

In 2002, in his research on telecommunications reforms “Does Sequencing Matter? Regulation and Privatization in Telecommunications Reforms”, Scott Wallsten questioned whether sequencing between privatization and regulation affects telecommunications outcomes and what should be done first: privatization or institutional reform. In the early 1990s, Eastern European and the former Soviet Union countries implemented privatization based on consultations from Western economic advisers. These consultants recommended that rapid privatization was the only realistic way to reform state-owned enterprises, but they primarily concentrated on corporate governance and macroeconomic conditions, and they did not sufficiently address microeconomic, competitive or institutional issues that could affect the telecommunications industry. At the end of the 1990s, the reformers realized that “ignoring institutional framework and competition issues was a mistake and that institutional reform should have preceded privatization” (Wallsten, 2002). This recognition was proven by Wallsten’s empirical study on telecommunications.

Using data collected from 1985 to 1999 from 200 countries on the relationship between privatization and regulatory reform and from 33 sample countries on the relationship between privatization-regulatory reform and investment absorption, Wallsten’s research was carried out based on the two hypotheses:

“First, having in place a regulatory authority before privatizing will facilitate improvements in the sector. While competition is technically feasible, new entrants must
overcome significant obstacles to gain an industry foothold, and they are more likely to be successful if they can interconnect with the incumbent in order to provide services between their users and those of the incumbent. Putting the regulatory framework in place before privatizing thus may help foster competition, or ensure that the incumbent’s monopolist obligations are clear when the firm is privatized.

Second, failing to put in place the regulatory framework before privatizing will reduce the value of the firm to investors.” (Wallsten, 2002).

In his research, Wallsten experienced difficulty in defining a variable to indicate whether or not a regulator was independent. Wallsten simply extracted the variable based on the regulator’s self-claim of independence without any independent verification of such claim. Further, there is a difference between being independent from short-term political pressure and completely independent from political pressure, and the variable used by Wallsten did not provide any distinction between these two types of independence. In spite of the difficulty in defining a variable to narrowly measure a regulator’s independence and to examine more precisely the effectiveness of institutional reform on the telecommunications market, Wallsten’s research did confirm that:

- “In infrastructure utility industries like telecommunications, where the incumbent can be a significant bottleneck to competition, establishing a regulator before privatizing telecommunications firms is correlated with improvements in telephone density, mobile subscriptions and investment. Without the regulatory interventions, the privatized firm has no incentive to allow competition. Therefore, it is important to build an institutional and regulatory framework first, then privatize the firms later;

- Establishing a regulator before privatizing also increases the value of telecommunications firms, since the investors are willing to invest in a firm in a country that has less regulatory risks and specified governing rules.” (Wallsten, 2002).
Relating to the role of telecommunications regulatory agencies, Wallsten pointed out that they should be independent in managing the market for which they are responsible, but too much independent with the state can be harmful, since operators have closer contact with the regulator than consumers, and consumers can only affect the regulatory process via political channels to the state. In such a case, too much independency from the state may create negative influences and consumers’ rights of protection may not be properly carried out.

2.1.4 Interaction between Telecommunications Regulator and Competition Agency

In their studies of telecommunications regulation and especially as it relates to the mobile market, Invent (2000), Lie (2002) and Groebel (2003) discuss the necessity of government intervention in the telecommunications market, the telecommunications regulator - competition agency relationship and the dominance of these two organizations. Invent, Lie and Groebel had consensus on the need of government intervention in telecommunications and mobile markets in order to ensure the successful transformation from monopoly to competitive provisioning of telecommunications services. Collectively they found that regulatory intervention is essential to resolving licensing, interconnection and spectrum allocation issues among operators.

Competition is made certain by both telecommunications laws and general competition laws. “Telecommunications laws act as ex ante and are precise in establishing indicators of acceptable competitive behaviors” (Invent, 2000), while competition laws are aimed at preventing and correcting anti-competitive activities.

Groebel further suggested that in the mobile market, sector-specific rules that promote competition should be created at the starting point, for example rules and procedures that provide for efficient allocation of spectrum. After this step, general competitive laws are applicable to the mobile market.
2.2 Impact of Liberalization, Privatization and Institutional Reform in Country-Groups

2.2.1 Telecommunications Competition, Privatization and Regulation in Africa and Latin America

Several researches on the impact of competition, privatization and regulation had been published prior to the publishing of Wallsten’s paper (2001), but the previous researches either presented a case study, or a non-econometric examination on the same issues, but they did not provide any econometric analyses. In 2001, Wallsten published his econometric study on the affect of competition, privatization and regulation by using original data representing 15 developing countries in Africa and 16 developing countries in Latin America from 1984 to 1997.

Evaluating the sector performance by using 5 indicators: main lines/100 inhabitants, payphones/100 inhabitants, connection capacity/100 inhabitants, employees/line and price per 3-minute local call and 2 variables (independence of regulator and the actual competition in numerous telecommunications sub-markets), Wallsten showed that:

- “Competition – measured by mobile operators that are not owned by the incumbent operators– is correlated with increases in per capita number of mainlines, payphones and connection capacity, and with a reduction of local call tariff;

- Privatization alone is associated with decreased connection capacity and positively correlated only with payphones;
• Privatization combined with a separate regulator is positively correlated with telecommunications performance in terms of connection capacity, productivity and main lines per capita;

• Privatization without regulatory reform may not necessarily improve services and granting exclusive periods to the incumbent operators may seriously delay the real benefits that competition can bring.” (Wallsten, 2001).

2.2.2 Telecommunications Privatization in Asia Pacific Region

Ure and Vivorakij published their research on telecommunications privatization in 22 Asia Pacific countries in 1997. They found that in Asian developing countries, such as China and Vietnam, privatization is being driven by similar considerations as in any other region: privatization is a way to attract larger investment resources and to generate a better response to the customers’ demands. In these countries, “a state-sponsored consensus is often the preferred approach …, development is the key issue facing governments, and the role of telecommunications in development is paramount” (Ure and Vivorakij, 1997, pp. 17).

2.2.3 Telecommunications Privatization Process in Developing Countries

In 2004, Wallsten published another empirical research on telecommunications privatization in developing countries. In this paper, Wallsten used data on privatization of 32 firms in 28 developing countries and exclusivity and performance indicators in 29 developing countries to quantify the effects of exclusivity periods on the firms’ sale price and on sector performance in countries that privatized their telecommunications services providers. Unlike all previous empirical researches on privatization, Wallsten focused on impact of a detail privatization process on telecommunications outcome, an issue that had been completely ignored before. He presented two significant findings regarding privatization in developing countries:
“Governments in developing countries particularly tend to give the newly privatized firm a monopoly period for telecommunications services provisioning in order to increase the governments revenues from the sale of the monopoly firm. However, turning a public monopoly to a private monopoly may not generate telecommunications improvements;

Exclusivity periods (private monopoly) can double a firm’s sale price and attract more capital to a national budget, but at the cost of reducing future investment in the telecommunications network and the country’s net welfare. Exclusivity periods are associated with up to a 40% reduction in growth in terms of telephone mainlines. In other words, shifting from public monopoly to private monopoly is not the best choice in deploying privatization.” (Wallsten, 2004).

2.2.4. Telecommunications Regulatory Institutions in OECD Countries

During two decades, from early 80s to end of 90s, most of the OECD countries fully or partially privatized the public telecommunications operators and undertook regulatory reform and, in turn, the resulting competitive market and regulatory environment is having a substantial impact on the structure and organization of telecommunications industry. In 2001, Boylaud and Nicoletti released their empirical study on the effects of competition and institutional reforms in 23 OECD countries from 1991 to 1997 (Boylaud and Nicoletti, 2001). They analyzed long-distance and mobile telephone services, the two services that were significantly affected by regulatory reform in OECD countries. Boylaud and Nicoletti indicated the following remarkable findings:

“Increasing the product market (measured by either the share of new entrants or by the number of competitors) generally brings about increased productivity,
Telecommunications competition generally has a strong positive effect on productivity and quality of services and a strong negative effect on prices;

• From policy-makers’ viewpoint, it is confirmed that competition and regulatory practices that favor competition will assist new foreign and domestic operators to compete effectively and, as a result, end users will benefit from these innovations.” (Boylaud and Nicoletti, 2001).

2.2.5. Privatization and Institutional Reform in Transition Countries

General privatization and its sequencing in transition countries is the main topic of Stiglitz’s research in 1999 and of the research completed by Godoy and Stiglitz in 2006. In the 1999 paper “Wither Reform? Ten Years of the Transition”, Stiglitz pointed out that privatization was not an end, it is a way to achieve a sustainable, equitable and democratic environment. “Each of the transition countries started their transition with a different history and a different set of human and physical endowments. Some countries had experienced the central planning mechanism for most of the 20th century, such as the Former Soviet Union (FSU), while other Eastern European countries, China and others, had adopted central planning only after the end of World War II. Several countries adopted shock therapy to carry out economic reform, for example Eastern European countries, while others - such as China - preferred a more gradual transition”. (Stiglitz, 1999). The contrast between the two strategies – shock therapy and gradual transition – can be evidenced in the case of the two largest transitional countries, China and Russia. Stiglitz compared the two countries’ respective Gross Domestic Product over the decade between 1989 and 1999, and he concluded that “China’s GDP nearly doubled, while Russia’s almost halved. Consequently, while Russia’s 1989 GDP was more than twice that of China’s, Russia’s GDP was a third smaller by 1999. Further, Russia also doubled
its inequality of individual income during that decade and poverty rising from 2 million people in 1989 to over 60 million people by the mid-90s. There may be an argument that since China was much less-developed than the FSU and other Eastern European countries when they started economic transition, China might achieved faster development rate. But interestingly, China did better than countries of its comparably low per capita income, while Eastern European countries did worse than countries of their comparable per capita income during the decade 90s.” (Stiglitz, 1999).

Starting from the viewpoint that standard neoclassical theory suggests that for a market economy to work well, competition must be accompanied with private participation. However, when a country can not have both factors at the same time, Stiglitz questioned “whether privatization should be undertaken alone?” He further questioned “what would be the best sequencing policy:

- Proceed with privatization as fast as possible; the occurrence of privatization is more important than how the occurrence took place. Supporters of this viewpoint argued that the initial private owners did not play an essential role since the market would soon re-allocate the assets to the efficient owners. Privatization can be done quickly while it takes years to develop the regulatory framework for competition and the legal system to enforce competition.

- Proceed with privatization as soon as an appropriate framework for privatization has been established, but do not wait for an appropriate legal (regulatory and competition) framework to be in place.

- Only proceed with full privatization after an appropriate legal framework is in place, because privatization is not a great achievement. Privatization can be done whenever the owner wants – if privatization is merely undertaken by giving away property to others by distributing equity shares of the state-owned companies for free or at very low price, i.e. implementing privatization without institutional reform. A private and competitive market is a great achievement, but such a
market must be guarded by a set of credible and enforced laws and regulations.” (Stiglitz, 1999).

Stiglitz argued that “success, rather than speed, was of the essence and successful strategy had to have the property of time consistency, and Eastern European and the former Soviet Union countries would have learned from many bitter and disappointing failures, when they gave away national assets by allowing privatization without the availability of a applicable legal framework and subsequently had to sacrifice their own economic growth.” (Stiglitz, 1999).

In 2006, Godoy and Stiglitz released an empirical research on the “roles of liberalization and privatization policies and the speed with which they were implemented (shock therapy versus gradual transition)” (Godoy and Stiglitz, 2006). In order to examine the decisive factors of a successful transition from a central market mechanism to a market-based one, the researchers analyzed the initial conditions (especially the burden left by the communist era) and the existing legal institutions in 23 transition countries from 1990 to 2001. In this research, Godoy and Stiglitz noted that China and Vietnam, so far, have been the most successful transition cases by choosing the gradual approach; however, the two authors excluded these two countries from their research, simply in order to make their research comparable to previous studies on the same issue, in which the China and Vietnam cases had not been analyzed.

After examining the interactions of 3 factors – speed of privatization, initial conditions and legal institutions – that affect economic performance outcomes, Godoy and Stiglitz concluded that:

- “Privatization speed has a negative effect on growth and a gradual approach shows more advantages than shock therapy. Rapid privatization adversely affected decadal growth in transition countries;
- Institutional strength plays an essential role in facilitating development;
- Initial conditions have an insignificant effect on cross sectional growth;
• Competition and regulation positively contribute to the determination of how
privatization will affect a country’s growth performance. A country that
simultaneously privatized and established a regulatory framework that
promotes competition may have greater potential growth than a country that
only privatizes and ignores institutional reform.” (Godoy and Stiglitz, 2006).

2.3. Significances of Researches on Vietnam’s Telecommunications

Though telecommunications competition was introduced in Vietnam in 1995, but
such competition was not realized in the Internet services provisioning segment until
1997, and in other value-added services - Voice over Internet Protocol - until 1999. Later,
competition in providing facilities-based services was realized in 2003 by the
commencement of Saigon Posts and Telecommunications Corporation (SPT) mobile
network. Further, privatization process of the mobile operators is still in its initial stage,
where 4 of the six mobile networks are so far wholly state-owned companies. Since the
mobile competition has been realizing for around 4 years, while the privatization
approach is being tested, there is not extraordinary that most of published reports and
drupal have been concentrated on the Vietnam’s Internet segment, and there are few
papers analyzed the impact of competition and privatization on the Vietnam’s
telemcoomunications. As observed by the author, there is no academic paper on the
influence of public policy on the Vietnam’s telecommunications market as a whole and
the mobile market in particular is recorded\(^5\). The following part presents literature review
on three working papers on Vietnam’s telecommunications that were publicized by
different international organizations: the United Nation for Development Programme, the

\(^5\) This conclusion is made after reviewing Waseda Journal database, include 135 journal access portals and
Vietnamese academic journals (The Economic Development Journal – published by Ho Chi Minh city
Economic University, The Economy and Forecast Journal – published by the Ministry of Investment and
Planning, The External Economy Journal – published by the Hanoi Foreign Trade University, the
Developmental Economy Journal – published by the Hanoi National Economy University, and the Posts
and Telecommunications Journal – published by the Ministry of Posts and Telematics
2.3.1 Competitiveness of the Vietnamese Telecom Sector

Using funding from the United States Agency for International Development, Nguyen, Pham and Gullish engaged in research of the three main issues of Vietnam’s telecommunications market: legal and institutional telecommunications framework, market structure and ownership, and the dominate role of the incumbent operator. This report was made public in 2005 and provides a picture of Vietnam’s telecommunications sector, analyses recent regulatory changes and competition status, and suggests actions that Vietnam’s government should undertake in order to achieve its strategic objectives. By using descriptive and empirical methodologies to examine the sector, the authors concluded and recommended that:

- Telecommunications competition has been introduced in Vietnam, but it has remained geographically isolated (sound competition in urban areas) and services specific (sound competition in Internet and mobile services). Further, state-owned companies are the main players in all market-segments, and the incumbent acts as the dominant player in each, thus reforming the incumbent operator is primary to the success of the liberalization program.

- Although Vietnam’s government has made important and notable strides in improving the regulatory framework in order to meet international standards, it needs to establish a separate and autonomous regulator outside the MPT (Ministry of Posts and Telecommunications) to realize the potential benefits of these strides. Further, the interconnection regime and licensing process should be improved to attract market entrants and competitive operators.

- The government needs to build consensus for changes from all stakeholders and segments around privatization. This process will involve
better public access to sector information and co-ordination between government and non-government stakeholders, such as consumer groups and business associations.

This report provided a panorama of the telecommunications sector in Vietnam generally, but it failed to adequately focus on Vietnam’s mobile communication market. Only a single page was used to outline the mobile competition situation, and the report did not analyze any of the prerequisite topics of mobile communications, such as spectrum and numbers management. Further, it did not concentrate on how far policy innovations assist each other in realizing the state targets and it did not recommend a strategic selection process for private investors.

2.3.2. Competitiveness and the Impact of Trade Liberalization in Vietnam: the Case of Telecommunications

Competitiveness of Vietnam’s telecommunications market is also the theme of a project that was jointly carried out by the United Nation’s Development Program in Vietnam and the Vietnam Ministry of Planning and Investment. The final report of this project was released in 2006. This project aimed at 4 main objectives:

- Examining the speed and progress of reforms in the telecommunications services sector and inconsistency of the current regulations with the WTO’s (World Trade Organization) rules and principles;

- Portraying the current competitiveness situation of the telecommunications sector and its dynamics in the process of liberalization under domestic reform and Vietnam’s international commitments;
• Analyzing the impact of telecommunications trade liberalization of services on the telecommunications services sector, as well as on other sectors and related groups;

• Assisting Vietnam’s policy makers and negotiators in formulating appropriate policy and gaining strategic positions in the WTO accession negotiations and other regional and bilateral trade negotiations.

By using a SWOT (Strength, Weakness, Opportunities and Threat) matrix to evaluate the telecommunications liberalization, competition and institutional reform, this paper pointed out that due to the gradual introduction of these public policies, Vietnam’s telecommunications sector has experienced the fastest growth rate in the world. In fact, Vietnam is ahead of most countries in the region in implementing network liberalization. Institutional reform is generally adaptable, but the lack of detailed regulation, the lack of an independent regulator and the presence of a powerful incumbent in Vietnam have resulted in a slower than desired pace of liberalization and higher residual tariffs in comparison with other regional countries.

Despite these significances, the report contained some deficiencies: it provided limited analyses of the overall regulatory tools and did not address scarce resources management, as was the case with previous researches. Further, opportunities for private investors to enter the market, especially when the country further integrates into the globalization process are not discussed. The judgment that there is no independent regulator is concluded merely through the review of the bundled policy making and regulatory functions of the sector-ministry, along with an adherence to the claims of the private sector, without any systematic evaluation.

2.3.3. Telecommunications Sector: Current Status and Future Paths
In 2006, the World Bank carried out series of researches on Vietnam’s infrastructure, and the telecommunications industry was part of this research. The report on telecommunications identified that during 1990-2005, Vietnam telecommunications has expanded rapidly, especially in terms of accessibility to fixed and mobile services. However, in terms of efficiency that is indicated by number of main lines per employee, Vietnam lags its regional counterparts substantially and its mobile tariff remains high by regional standards. Meanwhile, the interconnection issue – a key prerequisite for effective competition – is not properly regulated: there is no transparent process to deal with interconnection disputes and rates, the incumbent operator dominates all market segments and a strong and predictable regulatory institution does not exist. The report recommended that priority should be given to the following 4 public policy issues:

- Promote competition and private equity participation in order to reap the benefits of market competition;
- Those pro-competitive policies should be supported by a highly visible, credible, transparent and effective regulatory agency;
- The incumbent should be restructured to reduce its dominant position;
- Telecommunications services provisioning to rural areas should be ensured by the adoption and implementation of relevant programs, for example the projects to provide not only main telephone lines but also Internet and broadband access to rural areas.

Like the two previous researches on Vietnam telecommunications, the World Bank paper pointed out the benefits of competition and privatization in the industry, but it did not overcome the previous uncovered topics: the prerequisite issue involving mobile communications regulation – management of scarce resources – was not analyzed, and the regulator independence was indicated by name only without a thorough explanation.

2.4 Chapter Conclusion
Relevant researches on privatization, competition and institutional reforms, at any scale – worldwide, regional, group of countries or Vietnam in particular, confirm the positive roles of these innovations on the overall economic development and specifically as it relates to the telecommunications sector.

These researches consistently point out that competition must be bundled with privatization and institutional reforms, so the combined impact of these three factors will reach the optimal outcome.

- Competition innovation can not be initiated and ensured by institutional reform, and competition without privatization may lead to inefficient utilization of government resources.

- Privatization without competition will shift the industry from a public monopoly to a private monopoly and will not generate a positive performance outcome. Privatization without institutional reform will negatively influence development since the market can not be self-regulated in the first stage of privatization.

- Privatization should be implemented once institutional reforms have been established and this sequencing has correlated with the developmental performance.

Telecommunications pro-competitive responsibilities are simultaneously shared between the sector-regulator and the competition agency. However, the sector-regulator acts as *ex-ante* while competition agency participates as *ex-post*. The independence of the sector-regulator thus plays a prerequisite condition in ensuring the effectiveness of competition and privatization policies. Institutional reform must be in place, both in terms of creating a neutral and independent telecommunications regulator and in terms of establishing an appropriate legal framework for a competitive environment.
Interestingly, the majority of the previous policy innovations researches were completed using empirical methodology, therefore, the correlation between competition, privatization and institutional reform with telecommunications performance outcomes have been quantitatively confirmed.

Among the various researches on policy innovations in different country-groups, Vietnam has been mentioned only once, and that was in the study of Ure and Vivorakij (1997) where the special characteristics of Vietnam telecommunications competition (the market is occupied by all state owned companies) were outlined. In their research in transition countries, Godoy and Stiglitz (2006) did not analyzed the case of Vietnam, purely in order to make their examination comparable to previous researches on the same issues.

A number of reports on Vietnam telecommunications were released recently by international organizations. These reports analyzed the overall situation of the telecommunications industry, ranging from fixed to mobile and Internet services. They either used descriptive or SWOT matrix methodology to evaluate the impact of competition and privatization on this industry. However, all of these reports fail to examine the most significant and important issue relating to mobile communication: scarce resources management. Further, they classified the telecommunications regulator as non-independent without thoroughly evaluating all of the relevant indicators of this concept; and they did not portray the vision of private investors in different privatization scenarios.
Chapter 3. COMPETITION POLICY AND MOBILE SERVICE PROVISIONING IN VIETNAM

3.1 Vietnam Overview

Vietnam is a country in South East Asia, with China at the north, Cambodia and Laos at the west, the East Sea at the east and the Pacific Ocean at the east and south.

The country’s north-south length is 1,650 kilometers. Its east-west width is 600 kilometers in the north, 400 kilometers at the widest point in the south, and 50 kilometers at the narrowest point in the center.
3.1.1 Socio Administrative Profile

The population of Vietnam was approximately 83 million at the end of 2005 and consisted of 54 different minorities, in which Kinh is the largest ethnic group (more than 90%). The population growth rate was approximately 1.44% in 2004 and more than one fourth of the population resides in urban areas, as shown in Figure 3-2.

Administratively, Vietnam is divided into 64 provinces, grouped into 8 different regions: Red River Delta, North East, North West, North Central Coast, South Central Coast, Central Highland, South East and Mekong River Delta. Each of these regions has different geographical, social and economic characteristics; the Mekong River Delta region is the most populated and developed region, while the North West region is the least densely populated and the most under-developed.

3.1.2 Economic Background

After the country’s reunification in 1975, a centrally planned economic mechanism – modeled after the economic mechanisms adopted in Eastern European countries and the former Soviet Union – was established throughout the whole country for a decade. In the centrally planned mechanism, goods and services were performed by the state-owned enterprises and at prices determined by the government. Short-term and medium-term plans (normally 5-year-plans) were one of the most important
administrative regulations, in which economic targets were described and enterprises had to carry out their business operations based on those plans. During the central planning period, the government was considered the supreme buyer and the state-owned enterprises were the designated sellers. In this economic arrangement, the sale prices were exclusively determined by the buyer and, subsequently, the products and services were distributed to the inhabitants based on their relative positions in the society. Some characteristics of the centrally planned economy are somewhat comparable with those of a natural monopoly: both of them share the viewpoint of considering products/services as public utilities, so that developmental targets and prices are precisely controlled by the government. From 1975 to 1986, when Vietnam functioned pursuant to a centrally planned mechanism, the concept of competition was not accepted, the private business sector was not legally recognized and laws on tax, banking, insurance, business etc. did not exist, simply because the economy was not compatible with the legal system of a market-based society.

Few minor economic reforms were informally introduced in Vietnam during the end of 1970s and early 1980s (Fforde, 1996), but they were local in scope. In 1986, the Communist Party officially declared an economic reform program and the economy has since moved from the centrally planned to a market-oriented mechanism. Competition was introduced, private participation was encouraged and the government did not control prices as strictly as before. Further, there have been many efforts to build a suitable institution and legal system to regulate the changing economy.

Economic reform has brought many positive changes to Vietnam’s society. The country maintained an average development growth rate of 7.36% in the period 1990 - 2005 (see Figure 3-3), with a GDP per capita of 553.27 $US in 2004.
3.2 Mobile Communications Competition

3.2.1 Introduction of Mobile Competition

Before the implementation of the economic transformation in 1986, Vietnam’s telecommunications industry was considerably under-developed and exclusively focused on satisfying the communication needs of the bureaucracy. “Telecommunications and postal services were provided by a single public firm – VNPT (Vietnam Posts and Telecommunications Corporation), which was restructured as Vietnam Posts and Telecommunications Group in January 2006” (Tran Nhat Le and Obi Toshio, 2007). This firm was also in charge of providing complementary products to the industry, such as cables, switches and exchanges. Neither a telecommunications regulator nor telecommunications regulations existed, and the VNPT acted both as the natural monopoly firm and the regulator. The country had experienced a period of typical slow growth and development; as a result in 1986, only one individual per one thousand of the
population had access to telephone services, and the country’s modest development of fixed telephone lines numbered only 78,000 (ITU).

Since 1986, Vietnam has initiated selective economic reforms by abolishing the centrally planned mechanism, adopting various market-based principles and accepting competition and private participation in numerous sectors. The telecommunications industry as a whole and the mobile market in particular also benefited from the national economic reform: foreigners were allowed to co-operate with domestic partner to roll out telecommunications network, and the monopoly status of the VNPT was dissolved.

“Mobile services were introduced in Vietnam in 1992 when the VNPT built and operated a mobile terrestrial network named Callink in Ho Chi Minh City in 1992” (Tran Nhat Le and Obi Toshio, 2007). Mobile services were exclusively provided under the monopoly of the VNPT until 1995, when the Prime Minister abolished its natural monopoly status and allowed two other companies (Vietnam Military Electronic and Telecommunications Corporation – Viettel, and Saigon Posts and Telecommunications Corporation - SPT) to do business in the mobile market. The mobile market thus was theoretically shifted to competitive one since 1995. However, these two companies could not receive licenses for years due to the lack of licensing regulations. Further, mobile competition was not realized until mid-2003. In fact, from 1992 to 2003, the mobile market has solely occupied by the VNPT.

In 2003 and 2004, two other companies received licenses to build and provide mobile services; those were Hanoi Telecom Corporation (Hanoi Telecom) and Vietnam Electric Telecommunications Corporation (EVN Telecom).

Mobile competition was actually realized in July 2003, when the second mobile operator – SPT – started providing services to customers. Consequently, the other mobile licensees – Viettel, EVN Telecom and Hanoi Telecom – also commenced their business in October 2004, 2006 and 2007, respectively.
Monopoly Period 1992-1995

“Until 1995 all telecommunications services provisioning was managed under a monopoly of the single entity VNPT. This monopoly point of view was legally reflected in the telecommunications framework, in which terms such as “market” or “competition” were not referred to and the regulator’s licensing responsibility was limited solely to issuance of licenses to private networks; VNPT was the exclusive telecommunications carrier and could provide services to the public without licenses” (Tran Nhat Le and Obi Toshio, 2007).

“During this period, VNPT built and operated a mobile terrestrial network named Callink in Ho Chi Minh City in 1992. The Callink network was deployed under a 6-year business cooperation contract (BCC) with Singapore Telecom (this contract was extended once in 1998) to provide services to customers in Ho Chi Minh City using AMPS (Advanced Mobile Phone Systems) technology. Callink reached approximately 50,000 subscribers at its peak and finally ceased operations on August 1st, 2004. One of the main causes of this network failure was the employment of AMPS technology; it did not allow mobile operators to easily expand their networks or to provide various mobile value-added services to satisfy customers’ demands. Meanwhile a short time after the deployment of Callink, a GSM (Global Systems for Mobile Communications) network was launched into operation and it provided many advantages over the older technology-based AMPS network. The second mobile network was deployed in May 1993, when VNPT started building its first GSM network under the trademark MobiFone, which was control by Vietnam Mobile Telecom Services Company (VMS), a VNPT subsidiary” (Tran Nhat Le and Obi Toshio, 2007).

During this period, even though there were two mobile networks in operation, they were not competitors of each other: both of them were under the control of the VNPT, and further, Callink could only provide services in Ho Chi Minh city, while
MobiFone coverage was also limited to a number of provinces. Additionally, the tariff had to be set forth by the regulator.

**Theoretical Competition – Actual Monopoly Provisioning 1995 – July 2003**

In spite of the fact that two new companies – Viettel and SPT – were allowed to do business in the mobile market since 1995 and Hanoi Telecom was awarded mobile license in April 2003, all three of these licensees could not provide services for a number of years.

In 1996, the VNPT received permission to establish the second GSM network – VinaPhone. VinaPhone, together with MobiFone – another mobile affiliate of the VNPT – jointly met the mobile communication needs of customers until July 2003. There was no typical difference between the services provided by these two providers: they provided the same types of services under the same prices, which were decided by the VNPT and approved by the regulator, and there were no choices extended to customers.

**Mobile Competition from July 2003**

Seven years after receiving permission to provide mobile services, SPT debuted its services under the trademark SFone in July 2003. The company initially provided its services in 12 provincial coverage areas and subsequently expanded to nationwide service provisioning in 2006.

On the other hand, the second mobile operator – Viettel, commenced its business operations in October 2004 under the trademark Viettel Mobile. In contrast with SFone, Viettel Mobile deployed nationwide coverage areas immediately when it started providing services. The network develop rapidly and in January 2007, after only 2 years
of deployment, Viettel Mobile had a total of 7.5 million subscribers, ranks as the third mobile network in terms of mobile subscriptions.

Another mobile services provider – EVN Telecom – began offering mobile services in May 2006 under the trademark E-Mobile. The last mobile operator – Hanoi Telecom – started providing services in January 2007 after numerous delays.

Currently, customers can choose to use mobile services of 5 different networks, MobiFone, VinaPhone, SFone, Viettel Mobile and E-Mobile, at competitive prices.

3.2.2 Outline of the Mobile Market and the Mobile Operators

The Vietnam’s mobile market, from 1992 to mid 2003, was posited by MobiFone and VinaPhone, two VNPT’s subsidiaries. The market became competitive in July 2003, when SPT initiated its mobile services; and the sound mobile competition was started from October 2004, when Viettel Mobile provided its services to customers. In 2006 and January 2007, the two other operators, EVN Telecom and Hanoi Telecom also deployed their networks. As of 2006, MobiFone, VinaPhone and Viettel Mobile dominated the mobile market, with subscriptions of 7.3 million, 7 million and 7.2 million, respectively. Meanwhile, the mobile subscriptions of EVN Telecom (under the trademark E-Mobile) and Hanoi Telecom (under the trademark HT Mobile) recorded modestly at 250 and 150, correspondingly as illustrated in the Figures 3-4 and 3-5 below.

Figure 3-4. Mobile Subscriptions in Vietnam, from 1994 to 2006, divided by Operators

Figure 3-5. Vietnam Mobile Market Shares, February 2007

Source: MPT Vietnam
The establishment of MobiFone was dated back in 1993, when the Department General of Posts and Telecommunications (now restructured as the Ministry of Posts and Telematics) decided to establish Vietnam Mobile Services Company (VMS) – a subsidiary of the incumbent VNPT. In May 10\(^{th}\), 1994 MobiFone network started providing services in the 3 southern provinces: Ho Chi Minh city, Bien Hoa and Vung Tau. The network expanded its coverage to Hanoi in July 1994 and had total 11 base stations at the end of 1994. In May 1995, MobiFone signed a Business Cooperation Contract (BCC) with Comvik – a subsidiary of a Swedish financial and investment group Kinvik - to expand the network and since then, MobiFone became an independent accounting subsidiary of the incumbent VNPT. In 1996, the network was able to serve in 40 provinces; and extended to national coverage in 2000. Noting that MobiFone was operated without license until 2000, when the company asked for a license from the DGPT and such license was approved in May 2000, scheduled to end in 2015.

In May 2005, the BCC with Comvik was expired; VNPT refused to renew this contract and started a plan to list its equity shares on the national stock exchange market. Due to the complexity of resolving the BCC contract and the difficulties in evaluating the network’s value, this listing is not realized yet. This privatization process is expected to be implemented this year. So far, MobiFone is the single network that is operated as an independent accounting entity.

**VinaPhone**

VinaPhone, another GSM network of the incumbent VNPT, was awarded a mobile license in June 1996, and the network started operation in 18 provinces in June 26\(^{th}\), 1996. In early 1998, after one and half years of operation, the network expanded its coverage to all provinces. VinaPhone is managed by the Telecommunications Services Company (GPC) – a subsidiary of the incumbent VNPT and wholly invested by this mother corporation.
There are not much significant differences between VinaPhone and MobiFone services: these two networks provide similar services at unique prices set forth by the telecommunications regulator. The single distinction between the two is that VinaPhone is a dependent accounting entity of the incumbent VNPT, while MobiFone is an independent accounting network. Particularly, MobiFone has to pay for interconnection and leased lines services to other related subsidiaries of the incumbent and self-develops its services distribution to consumers, VinaPhone, so far, does not have to pay such fees and authorizes to the local telecommunications companies (subsidiaries of the VNPT at provincial and district levels) to deliver services to end users. The most important reason that explains for this dissimilarity is that MobiFone was operated under a BCC with foreign partner for 10 years, and there is binding to separate all of its revenue and expenditure in order to precisely divide the benefit sharing between the partners.

VinaPhone, likes its counterpart MobiFone, is preparing for listing on the national exchange market as decided by the Prime Minister, though the VinaPhone listing will be later than that of MobiFone, as stated by the VNPT and VinaPhone leaders.

**SFone**

SFone is the trademark of the mobile network that deployed by Saigon Posts and Telecommunications Corporation (SPT). SPT was established in 1995 as a joint stock company by several Communist and administrative organizations of Ho Chi Minh city and other state-owned companies. Interestingly that the incumbent VNPT contributes 18% of the SPT’s stocks, occupies itself as one of the SPT’s founding members and has its own representative in the SPT’s board of management. The registered capital of SPT was 500 billion Vietnamese dong (approximately 22.7 million $US)\(^6\). Due to the lack of investment capital, the SPT internally sold its equity shares to domestic private sectors

\(^6\) See the SPT’s business registration at http://www.dpi.hochiminhcity.gov.vn/vie/webappdn/view.asp?id=064090&ht=&loaihinh=DT&HienThi=1
via direct cooperation (not via listing on the stock exchange market) and as of 2005, 13% of the SPT’s stocks are possessed by domestic private investors.

The SPT received permission to anticipate in the telecommunications market in December 1995, when the Prime Minister issued an official document to allow the company to conduct telecommunications services. In May 1997, the telecommunications regulator awarded telecommunications license to SPT, accordingly the company can build telecommunications network for services provisioning. However, the company was in lack of both investment capital and telecommunications professional experiences, because all of its founding partners have not engaged in any telecommunications services provisioning, except the incumbent VNPT; while the incumbent was not interested with the idea of sharing its full market share with any other competitors. Consequently, the SPT could not build mobile network to provide services as licensed for couple years.

In October 2000, the SPT signed a BCC valued 230 million $US, scheduled to end in 2017 with SLD Korea (a company that is jointly registered in Singapore by three giant Korea electronic and telecommunications corporations: SK Telecom, LG Electronic and Dong Ah Telecom) to deploy a CDMA network. This BCC was not approved by the Ministry of Investment and Planning until 2002. Upon the approval, the SPT started its services in July 2003, firstly concentrated on 12 populated provinces, and extended to the nationwide coverage in 2006. Recently the SPT and its partner SLD Korea reported the MPT on a plan to increase the value of BCC up to 543 million $US, extend the duration of the BCC to 2023, and transfer the current co-operation form (BCC) to another effective form, such as establishing a joint venture between the two or privatizing the network.

**Viettel Mobile**

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7 In a meeting with the SPT in March 2007, the MPT’s Vice Minister confirmed its support the plan of increasing investment capital and extending duration of the BCC project. See MPT Newspaper Vol. 22, 2007 at [http://www.vnpost.mpt.gov.vn/bao_2007/so22/bcvt/3b1.htm](http://www.vnpost.mpt.gov.vn/bao_2007/so22/bcvt/3b1.htm)
Viettel Mobile is being operated by Viettel, a military company that was allowed to participate into the telecommunications market in 1995. Viettel was restructured from Sigelco, an affiliate of the Ministry of Military and was in charge of ensuring communications for military purpose. In June 1995, the Prime Minister released a document to agree to Sigelco to do business in telecommunications network. Unlike SPT, who also received permission to carry out telecommunications business at the same year, Sigelco was more experienced in deploying telecommunications networks and services and had an advantage of being a military entity, when telecommunications was treated as a sensitive sector and could directly affect the national security. The company was awarded a 20-year-mobile license in January 1998. Similar to the case of SPT, Viettel is financed indirectly from the national budget via the Ministry of Military. As reported by the Vice General Director of Viettel, in 2000, the company had less than 1.5 million $US in its budget and it could not mobilize sufficient capital to deploy its telecommunications licenses.

In October 2004, after a year of preparation, Viettel launched its mobile services in the nation scale. Viettel Mobile is currently ranked as the most rapid developed mobile network, when the company reached to 1.5 million subscriptions in October 2005, one year of its commencement and as of 2006, with 7.2 million subscribers, Viettel ranked as the second largest mobile network in terms of subscriptions.

**E-Mobile**

E-Mobile is the trademark of the mobile services provided by EVN Telecom, a subsidiary of the EVN – a state-owned group that posits as monopolist in the electricity market. EVN Telecom is directly financed by the EVN, initially was treated as a private network and was in charge of ensuring communications requirements of all EVN’s electricity affiliations. In 2002, EVN Telecom received licenses to provide fixed-telecommunications services to customers, and in 2004, the company was issued a license
to deploy a nationwide CDMA network. EVN Telecom, likes the case of Viettel, is familiar with telecommunications activities, and further, well financially supported by EVN, a giant state corporation.\(^8\)

This network debuted nationwide in February 2006 with the facilities and technology supported by ZTE (China) and Nortel (Canada), and the network has only 250 subscribers as of February 2007.\(^9\)

**HT Mobile**

In January 2007, Hanoi Telecom commenced its mobile services under the trademark HT Mobile. Hanoi Telecom was registered in Hanoi in May 2001 as a joint stock company with a registered capital of 8 billion Vietnamese dong (equivalent to around 500,000 $US), 51% of its stocks are owned by 3 state-owned companies: Hanoi Electronic Corporation (Hanel), Hanoi High-Tech Development Joint Stock (H.I.T) Company and Information – Telecommunications – High Tech Association; and the remaining 49% of its stocks are owned by 2 individuals.\(^10\) Hanoi Telecom, like the SPT – the other joint stock company that allowed providing telecommunications services, has no professional experience in telecommunications services segment.

Hanoi Telecom was awarded a 15-year-mobile license in April 2003 and consequently, in September 2004, Hanoi Telecom – together with its partner Hutchison Telecommunications (Vietnam) submitted a BCC project for deploying a CDMA network to the Ministry of Investment and Planning. Such a BCC, valued at 655,900,000 $US, was approved in February 2005 and scheduled to end in 2020. Hanoi Telecom,

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\(^8\) As recorded, at the end of fiscal year 2005, the EVN group had a registered capital of 7.232 million $US, 3 times higher than that of the incumbent VNPT. These data are clearly stated in the EVN balance sheet 2005 and the VNPT Charter.

\(^9\) This number is reported by the person in charge of the MPT. It is quite a modest number of subscriptions, after one year of the services’ launching.

after two years of network building, started its mobile services in January 15, 2007 at the national scale. After 2 months of operation, the network has around 150 subscribers, as recorded by the MPT.

3.2.3 Impact of Mobile Competition

The appearance of mobile competition has created significant changes to the mobile market. Consumers enjoy more diversified services at lower prices, the number of mobile subscribers has increased rapidly and the mobile market has become the most competitive telecommunications segment.

The positive performance outcomes of mobile competition are examined in three different aspects: services diversification, tariff reduction and subscriptions increase, as described below.

Services Diversification

Before mobile competition was realized in 2003, limited services were available for customers’ use, mainly because the mobile providers concentrated only on expanding their network coverage and increasing subscriptions, but they ignored the fact that diversified mobile services attract customers to subscribe to a mobile service in the first instance, and subsequently, to subscribe to value added services. Before 2003, very few basic services such as voice, short messages, roaming and value added services based on the Short Message System platform were available for customers’ choice (Trinh, 2003), and various mobile value added services like mail, game, multimedia mobile messages or music were not provided by the mobile operators.

When SFone and Viettel Mobile joined the market in July 2003 and October 2004, respectively, mobile services diversified rapidly. As of November 2006, Viettel Mobile
provided 12 different mobile services, ranging from basic to value-added services on a multi media platform, including mobile mail, mobile music and mobile imagining. Meanwhile, the incumbent VNPT also increased its available services and, as of November 2006, VinaPhone could provide 10 different categories of services.

Further, when mobile competition was not in effect, the mobile operators only offered 3 types of tariff: mobile post-paid, mobile prepaid and mobile daily. With the entrance of Sfone to the mobile market in July 2003, seven different services packets were accessible and, today, Viettel Mobile proposes 11 tariff baskets for customers’ selection.

**Tariff Improvement**

As a result of competition, tariffs have changed positively in three separate areas: tariff zone adjustment, timing unit modification and tariff reduction.

**Calling Zone Adjustment:** before May 2004, VNPT divided its mobile networks into 3 different zones and tariffs were charged based on the originating zone and terminating zone.

When SFone entered the market in July 2003, they applied 2 tariff zones instead of 3 zones liked the competitor VNPT. Sequentially, from May 2004 the incumbent restructured its tariff zones and applied 2 tariff zones as its competitor.

In January 2004, the MPT, based on a Prime Minister’s decision on regulating telecommunications tariff, agreed to allow the SPT – who is treated as non-dominant operator - to freely set forth its tariff. As a result, the SPT applied unique mobile tariff to all calls regardless to the geographical locations of their origination and termination. The

\[^{11}\text{All mobile operators are offering various tariff baskets to attract customers: they can register as a group of users (family subscribers), register for receiving calls only, register to call specific number(s) permanently.}\]
The calling zone adjustment has helped consumers to significantly save mobile communications expenses. Before May 2004, mobile subscribers had to pay at least between 3,100 Vietnamese dong and 4,400 Vietnamese dong (or from 20 US cents to 28 US cents) for one-minute extra-zone call. This rate was sharply reduced to 1,700 Vietnamese dong (or around 11 US cents) in July 2004, uncorrelated to the called party’s location; in other words the consumers can save at least from 38.6% to 54.8% for the used-to-be-extra-calls when calling zone scheme was abolished.

**Timing Unit Modification:** when the VNPT was the only mobile services provider, the mobile tariff was initially calculated by using the formula (3 minutes + 1 minute) and subsequently changed to increments of 1 minute.

When SFone started providing services, it offered a tariff using the formula (1 minute + 10 second increments). To meet this strategy, Viettel Mobile applied a 6-second increment to calculate mobile charges after October 2004. Immediately, VNPT changed its formula to a 30-second increment in August 2004 and finally to 6-second increment in 2006. Changing from the charging formula of 1-minute increment to a 30-second increment has brought benefits to a majority of VinaPhone subscribers (more than half of total VNPT mobile users) equal to more than 260,000 $ US per day (Hong Mai, 2004).

**Tariff Reduction:** during the mobile monopoly period 1992 - 2003, VNPT reduced its mobile tariff 3 times, in 2000, 2002 and 2003 as required by the regulator. However, this situation changed when liberalization into effect in 2003. During the time period 2003 to 2006, VNPT actively reduced its tariff 3 times and the mobile tariff that
was applicable in 2005 was 10% cheaper than that of the previous year (BMI, 2005). Figure 3-6, below, shows that a comparison of charges applied in 2003 and in 2007, results in a mobile connection charge that is reduced 75%, a monthly charge that is decreased 70% and the cost of 3-minute local call (peak) that is reduced by 18.6%
After the commencement of actual mobile competition in July 2003, the total number of mobile subscription increased 80.9% in 2004, nearly double the rate of the three previous years. This rate slightly increased to 81.3% in 2005, when Viettel Mobile joined the market and reached 110% in 2006. Additionally, in 2005 Vietnam had more than 4.5 million new mobile subscribers, equivalent to the total number of mobile lines that Vietnam achieved after 12 years of mobile deployment. This number continued to double in 2006 as shown in Figure 3-7.

Figure 3-7. Mobile Development 1992-2006
Restraints of Vietnam Mobile Competition in Comparative Analysis

In order to more precisely evaluate the role of competition to mobile development, this dissertation reviewed mobile growth in Vietnam in a comparative scenario with the situations in other countries, which applied different approaches in opening mobile market. Two countries are chose for the comparative analysis, those are China and Russian Federation, which are being ranked as transitional and developing countries, and share several similar socio-economic characteristics with Vietnam: the three countries had faced severe financial and economic problems during the 1970s and 1980s which caused by the implementation of centrally planned mechanism. From the end of the 1970s to early 1990s, these three countries implemented economic reform, and their mobile markets were also influenced by the reform process.

China - Vietnam Comparison
Unlike many other countries, when the second and subsequent mobile licenses were awarded to different private operators in Vietnam, the mobile market was opened to the state-owned entities only. At the time, one of the criteria for selecting qualified applications for a mobile license was that the applicant must be a state-owned company. This requirement was set forth in the Decree 109/1997/ND-CP on Posts and Telecommunications issued by the Government in 1997, and consequently in the Ordinance 43/2002 on Posts and Telecommunications released by the National Assembly in 2002. Initially, a company could be regarded as a state-owned entity when the state owned more than 50% of the company’s shares, or when the state held less than 50% of the shares but reserved the decisive rights in deciding relevant issues of the company. This stipulation was changed and after July 2007, based on the Law of Enterprises, only companies in which the state holds more than 50% of their equity shares can be treated as state-owned.

Noteworthy that accepting competition between the state-owned operators is not only being selected by Vietnam, but has also been applied in China – another transition country in Asia. The mobile telecommunications market in China is governed pursuant to a duopoly of the two state-owned entities: China Mobile and China Unicom. However, the two countries have approached facilitating mobile competition in different ways. In Vietnam, mobile competition was theoretically introduced in 1995 by allowing two new companies to provide mobile services to the masses. Since the government and the regulator did not actively carry out significant activities to realize mobile competition, such as providing them sufficient capital to deploy networks or timely adjusting regulatory activities, these new companies could not build networks and provide services for more than 6 year. As a result, the mobile market was under the monopoly control of VNPT for 11 years between 1992 and 2003, and even though two mobile networks were in operation from 1996 to 2003, there was no difference in terms of the tariff between the offered services.

To the contrary, China Unicom – the second telecommunications operator that was founded in 1994, started providing mobile services in late 1995 and became the
competitive rival of the incumbent China Telecom - was awarded significant support from the government. China Unicom was jointly financed by MEI (Ministry of Electronic Industry), Ministry of Railway, Electrical Power and PLA (People’s Liberation Army) and 13 other dominant state-owned corporations, each of the three ministries invested around 12.2 million $US and each of the 13 corporations contributed approximately 9.7 million $US, totally China Unicom had a registered capital of 121.2 million $US at its establishment (Xu & Pitt, 2002, pp.49). Further, while China Telecom is managed by the MPT (Ministry of Posts and Telecommunications).

Mobile duopoly between the two state-owned entities is one of the decisive factors facilitating mobile development in China. As of 2005, China had approximately 400 million mobile lines, equivalent of approximately 30% mobile penetration. Figure 3-6 shows that mobile services were introduced in China 5 years earlier than in Vietnam, and that in 1992 when Vietnam started providing mobile services, China’s mobile density was 12 times higher than that of Vietnam. This rate has varied between 8.2 and 6.2 during the period 1998-2003, when China pursued a duopoly scheme and Vietnam maintained monopoly scheme in mobile services provisioning. In 2004, one year after mobile competition was realized in Vietnam and the duopoly regime was retained in China, the gap of mobile growth between China and Vietnam, in terms of mobile density, was reduced to 4.2:1 in 2005 and continued to decrease to 2.7:1 in 2006 (Figure 3-8).

**Figure 3-8. Mobile Development in China and Vietnam, 1987-2005**
Russia Vietnam Comparison

In 1991, the Russian Federation started carrying out broad economic and political reforms. This is a most important difference between China, Vietnam and Russia, since China and Vietnam has been implementing economic reforms only. After introducing its reform program, all private and foreign investors were welcomed to build and operate mobile networks in Russia. However, the provisioning of mobile services is heavily dependent upon the availability of spectrum, and most of the available spectrum in Russia had been allocated to various private networks. Mobile competition in Russia briefly can be divided into 3 phases: regional monopoly 1991-1997 in almost 89 federal regions, macro regional competition 1997-2000 in 7 macro regions and national competition from 2000 to date.

In 1991, mobile services were commenced in Russia when Delta Telecom deployed its network, using the analog Nordic Mobile Telephone (NMT) technology in the frequency range 450 MHz in Saint Petersburg. Delta Telecom operated under a monopoly scheme for three years in Saint Petersburg, from 1991 to 1994, and other
operators could not enter this regional market because the accession to adaptable frequencies for mobile services was blocked and those frequencies were fully allocated to different mobile private networks, such as air navigation or the military. A few other mobile operators were also licensed in other federal regions, such as MMC that was licensed to operate in Moscow in 1992. Subsequently, the frequency range 800 MHz (for Advanced Mobile Phone System - AMPS) and 900 MHz (for Global System for Mobile Communications – GSM) was opened for commercial purposes in 1994 and 1995. However, the Ministry of Communications decided that it would impose a regional licensing mechanism, but not a national mechanism, and further, the Ministry decided to implement the GSM monopoly on a regional basis. Accordingly, the GSM monopoly was applied in 89 separate federal regions. Together with the single GSM operator deployed in each of 89 regions, AMPS and NMT networks deployed in some regions, the resulting appearance, on a general basis, was that of a regional monopoly.

The regional monopoly ended in 1997, when the Ministry made a decision to carry out an auction for a GSM license in 1800 MHz range in each of the 7 macro regions. This spectrum release contributed to the creation of macro regional competition during 1997-2000, when 2 GSM networks (operated in 900 MHz and 1800 MHz) plus other NMT and/or AMPS networks competed with each other in the 7 macro regions.

In 2000, the mobile market was fully liberated; regional mobile operators could expand their business from regional to trans-regional coverage. Consequently, a number of mergers, acquisitions and consolidations among regional operators were undertaken and led to the formation of 3 large national operators, commonly referred to as the Big Three (Mobile TeleSystems (MTS), VimpelCom and MegaFon). In addition to the Big Three, SvyazInvest – the fixed incumbent operator– also provided mobile services in various federal regions via its regional operators.

Compared to Vietnam, Russia opened its mobile market for competition 6 years earlier, and particularly, full competition was realized in the Russian mobile market in 2000, when sound competition had just commenced in Vietnam at the end of 2004.
Figure 3-9 illustrates that the two countries had achieved similar development in 1994, when penetration rates stood at 0.018% and 0.017% in Russia and Vietnam, respectively. However, when Russia obtained a mobile developmental growth rate of more than 200% in 1995, and then more than 100% in almost all surveyed years thereafter, except in 1998 and 1999; Vietnam did not experience such rapid growth rates. Vietnam’s highest development rates were achieved in 1993 and 1994 (the first two years of mobile introduction), 1996-1997 (when the second mobile network became operational) and 2000 (the year that prepaid services was instituted). In other years, Vietnam’s mobile growth rates were always less than 2.5 times those of Russia. Of comparative interest, from 2002 to 2005, Russia increased its mobile subscriptions by 10 million, 19 million, 38 million and 52 million, respectively and mobile penetration was continuously doubled during those 4 years; during this time-frame, the largest gain in mobile subscriptions in Vietnam was approximately 4.5 million in 2005. In 2005, Russia had over 126 million mobile subscribers and an 86% penetration rate; meanwhile such corresponding indicators in Vietnam were approximately 9 million and 10.48%.

Figure 3-9. Mobile Development in Russia and Vietnam, 1991-2005

3.2.4 Future Perspective of Mobile Competition

The mobile market is expected to be rapidly developed in 2007, when in January 2007, Hanoi Telecom initiated its services and Viettel Mobile offered an attractive tariff basket, which allows prepaid users to be able to use mobile services without connection fee and unlimited duration provided that they have made or received at least 1 call in 3 months, and the unlimited communicating basket (which allows the mobile users to be eligible to make and receive calls forever in case at least one call is completed in a year) is still retained by the SPT. The unlimited communicating basket offered by Viettel and the SPT aims at satisfying communications needs of the poor and rural inhabitants who occupy around 73% of the total population as of 2005\textsuperscript{12}. Further, the incumbent VNPT recently submitted a plan to reduce its mobile tariff by 10 - 15%. All of these factors will positively facilitate the mobile development in 2007 and there expects that at the end of 2007, Vietnam will have a total mobile subscriptions of 49.9 million, equivalent to a density of 60.24 mobile lines/100 inhabitants\textsuperscript{13}.

The year 2007 will also evidence the emergence of 3G (third generation), when the MPT is considering 3G policy and plans to issue 3G license this year. Recently all the three GSM networks: MobiFone, VinaPhone and Viettel Mobile are eagerly asking for a 3G bandwidth since their 2G (second generation) spectrum is exhausted and can not satisfy the required services quality.

The mobile market will be more competitive when WIMAX operators are allowed to deploy their mobile WIMAX networks. In 2006, the MPT allowed 4

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\textsuperscript{12} See the statistical data provided by the General Statistics Office at http://www.gso.gov.vn/default.aspx?tabid=387&idmid=3&ItemID=4678

\textsuperscript{13} As of February 2007, Vietnam has around 22.9 million mobile lines. The three CDMA networks target to get 5 million new mobile lines in 2007 (see the MPT Newsletters Vol. 06, 20 and 22, 2007), while the incumbent VNPT and Viettel aim at doubling their mobile subscriptions. Totally the number of expected new mobile lines in 2007 is 27 million.
operators to undertake WIMAX fixed network trial in one year, those are the incumbent VNPT, Viettel and two other ADSL operators: FPT and VTC. In March 2007, the MPT officials stated that the MPT will license to WIMAX wireless networks, probably in 2007.

There is no evidence showing that the appearance of 3G and WIMAX networks in 2007 will significantly correlate with the mobile development in Vietnam in terms of subscriptions and revenue, since the relative end-user equipments are considerably expensive and the requirement for wireless Internet access in Vietnam, so far, is not elevated.

3.3 Chapter Conclusion

The mobile market in Vietnam was theoretically opened for competition in 1995, when the government allowed two companies other than the incumbent VNPT to build networks and provide mobile services. However, a natural monopoly regime for the provisioning of mobile services was retained for more a decade, from 1992 to 2003, mainly due to the lack of active assistance from the government in creating favorable conditions for the new mobile licensees. During that period, VNPT was the single mobile operator and mobile services were provided by VNPT’s 2 separate mobile networks nationwide. In July 2003, other mobile licensees started providing services, and sound mobile competition was realized during the last quarter of 2004 although the mobile market remained under the control of different state-owned entities.

Competition is actively facilitating mobile development in Vietnam in various ways. It contributes to services diversification, significant mobile tariff reduction and subscription increases. After 2 years of sound competition was realized in Vietnam’s mobile market, mobile subscriptions double in the two continuous years 2005 and 2006, and mobile penetration more than triple, from 6.01 lines per 100 inhabitants in 2004 to 22.76 lines per 100 inhabitants in 2006.
Compared to China, when mobile duopoly was introduced in 1995 (it is noteworthy that 1995 was also the year Vietnam formally opened its mobile market to competition although such competition adoption has just taken effect 8 years later in mid-2003) and Vietnam still maintained mobile monopoly, mobile density in China was minimum of 6 times and a maximum of 12 times higher than that of Vietnam. This gap is being reduced after the introduction of mobile competition in Vietnam, and in 2006, the ratio was reduced to 2.7 times. Compared to Russia, which goes further in recognizing mobile competition (duopoly was started in 1997 and full competition was launched in 2000), Vietnam’s mobile market was much less developed. Having comparable mobile densities in 1994 (0.18 lines/100 inhabitants in Russia and 0.17 lines/100 inhabitants in Vietnam), but from 1997 to 2000, when Russia allowed duopoly and Vietnam kept monopoly for mobile services provisioning, Russian mobile density was always double that of Vietnam. After full mobile competition was introduced in Russia in 2000, Russian mobile density was 3.5 fold higher than that of Vietnam in 2001, and in the consecutive 3 years from 2003 to 2005, Russia had 8 time higher mobile rate than that of Vietnam.

Such a comparative analysis has confirmed the hypothesis that competition has played an essential and positive role in accelerating mobile services provisioning in Vietnam. During the monopoly period from 1992 to 2003, mobile services provisioning in the country was not actively developed: the tariff was inordinately high and was reduced only 3 times in 10 years; further, the consumers were only offered voice and simple mobile data services. Since mobile competition was realized in mid 2003 and sound competition emerged since the last quarter of 2004, the mobile segment has achieved significant growth. The mobile tariff has been reduced yearly, and mobile operators are actively introducing more diversified services baskets. Moreover, the mobile market is growing rapidly and in 2006, mobile density was 3 times higher than it was in 2004(Figure 3-10).

Figure 3-10. Mobile Development in a Comparative Competition Scenario
Mobile competition has also positively contributed to reducing the digital gap between Vietnam and other countries. The gap between mobile density in China and Vietnam was reduced from more than 6 times before 2004 to 2.7 times in 2006. The comparative analysis between Russia and Vietnam further pointed out that the more competitive the mobile market is, the more rapidly the mobile market grows. Shifting the mobile market from duopoly to full competition assisted Russia in further facilitating its mobile market development: mobile density in Russia from 2003 to 2005 – when the country adopted full competition – was 8 times higher than that of Vietnam, while such rate stood only at 2-fold during the Russian mobile duopoly period of 1997-2000.
Chapter 4. INSTITUTIONAL REFORM

A firm can not enter mobile market to do business without the competent authority’s permission, and mobile competition is always accompanied with institutional activities. Institutional activities, at first, must be undertaken to initiate competition via licensing, and then to ensure the existence of the new entrants, i.e. ensure the existence of the introduced competition by nurturing operation of the new entrants and resolving anti-competitive behaviors. Such licensing and ensuring activities are legally put into action by competent authorities, thus legal framework is needed to be created/reformed and functions of competent authorities should be clearly defined/redefined in order to carry out mobile liberalization. In terms of process, institutional reform can be classified as reform to initiate, nurture and accelerate competition and reform to ensure the existence of fair competition. Institutional reform can also be divided into two types: reform to create legal framework for competition and reform the competent authorities those are responsible for executing such rules and regulations.

In Vietnam, mobile competition policy is initiated and ensured by the National Assembly, the Cabinet, the Ministry of Posts and Telematics (MPT) - who is responsible for licensing, issuing rules and regulations on telecommunications, such as rules on tariff, interconnection, and dealing with telecommunications disputes; the Competition Council (CC) and the Competition Administration Department (CAD) – an organization under the control of the Ministry of Trade (MOT) and is particularly in charge of resolving anti-competitive behaviors. The MPT and the MOT are specially reserved as important policy makers: they are authorized to draft bills and submit these bills to be voted for laws; they are also responsible for drafting related decrees and decisions for submitting to the Cabinet for approval. Further, the MPT and the MOT are in charge of interpreting those laws, decrees and decisions by issuing their own rules and regulations.\footnote{14}{In an interview with the Vietnam Net in March 2\textsuperscript{nd} 2007, a National Assembly member stated that since all bills of laws are drafted by the line ministries, those bills are mostly reflected subjective viewpoints of the line ministries. In fact, comments and opinions that collected via public hearing will be transferred to the line ministries for the bills’ amendments and revisions; however such comments and opinions are rarely adopted if the line ministries consider that they are not suitable with their purposes. Since time to review...}
On the other hand, mobile operators can involve into policy making process in a narrower manner. They have the rights to make comments and proposals to the bills and drafts when a public hearing is opened or when the MPT/MOT sends those drafts to operators to get their particular opinion on the related issues. The role of consumers in the process is limited, since public hearing is normally undertaken when reviewing bills of laws.

Diagram 4-1. Roles of Different Players in Shaping Vietnam’s Mobile Competition Policy

Source: author

and consider a bill to be voted for a law by the National Assembly is sizeable short, there is difficult to make changes during the reviewing process at the legislative level. As affirmed by that National Assembly member, the laws finally are to implement the line ministries’ viewpoint only. See more detail at http://www.vietnamnet.vn/chinhtri/2007/03/668512/
As shown in Diagram 4-1, the MPT and the MOT/CAD play an essential role in shaping policy on mobile competition and implementing such policy. Policy related to initiating and nurturing mobile competition is prepared by the MPT, while methods to ensure fair competition are instigated by both the MPT and the CAD. Moreover, these two entities are in charge of interpreting and executing competition policy, then establishing and reforming institutional structure of the MPT and the CAD is one of the key issues in institutional reform agenda.

Comparing to the CAD, the MPT more deeply involves into governing mobile competition as its duties are ranging from initiating competition via licensing to nurturing and accelerating competition by applying rules and regulations on mobile-related issues, to resolving disputes among the operators (includes anti-competitive cases), and to protecting the consumers’ rights. On the other hand, the CAD is authorized to deal with anti-competitive behaviors once such behaviors are emerged, and to protect the consumers’ rights as illustrated in Table 4-1.

Table 4-1. Functions of the MPT and the CAD

<table>
<thead>
<tr>
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<th>MPT</th>
<th>CAD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Initiating competition</strong></td>
<td>Licensing to operators (includes managing scarce resources)</td>
<td></td>
</tr>
<tr>
<td><strong>Nurturing and accelerating competition</strong></td>
<td>Interpreting and implementing telecommunications laws and regulations</td>
<td></td>
</tr>
<tr>
<td><strong>Ensuring fair competition</strong></td>
<td>Resolving disputes among operators</td>
<td>Inspecting anti-competitive behaviors to resolve or to submit to the Competition Council for judgment</td>
</tr>
<tr>
<td><strong>Protecting consumers’ rights</strong></td>
<td>Executing laws on telecommunications and laws</td>
<td>Executing laws on competition and laws on</td>
</tr>
</tbody>
</table>
In order to examine hypothesis 2, whether institutional reform has been adequately considered to timely support and ensure mobile competition, and whether an independent regulator and a transparent and workable legal framework exists, this chapter is constructed by two parts: part 1 focuses on the institutional reform relating to the commencement and cultivation of mobile competition, and part 2 aims at analyzing institutional reform concerned to dealing with anti-competitive behaviors.

4.1 Institutional Reform: Establishment of the Telecommunications Regulator, Initiating and Nurturing Competition

4.1.1 Establishment of the Telecommunications Regulator

The establishment of modern telecommunications industry in Vietnam was dated back in August 1945, when the then Communist Party formed a division that responsible for posts and communications activities. Telecommunications and posts have been being governed together from that date by a single organization. From 1945 to 1972, telecommunications was considered merely as administrative tools to serve the bureaucracy, and until May 1972, telecommunications was treated as an economic sector. In 1990, after 45 years of development, business and regulatory functions were separated for the first time: regulatory functions were carried out by the Ministry of Transportation; and business functions were authorized to the Vietnam Posts and Telecommunications Corporation (VNPT, restructured as Vietnam Posts and Telecommunications Group in January 2006) which was also under the control of the Ministry of Transportation.
In October 1992, telecommunications regulatory and policy making functions were “separated from the Ministry of Transportation to a newly established ministerial agency – the Department General of Posts and Telecommunications (DGPT)” (Tran Nhat Le and Obi Toshio, 2007). The VNPT still played as posts and telecommunications operator and was put under the authorization of the DGPT. In 1993, a decree on rights, responsibilities and structure of the telecommunications regulator was released for the first time (Decree 28/ND), though the VNPT was still considered as a functional arm of the DGPT. The DGPT was restructured twice from 1993 to date, once in 1996, when the VNPT was structurally separated from the DGPT, and once in 2002, when the DGPT was restructured as the current Ministry of Posts and Telematics (MPT). Correspondingly, its responsibilities and structure were clarified in Decree 12/ND (1996) and Decree 90 (2002). Table 4-2 presents milestones of the telecommunications regulator’s development.

Table 4-2. Historical Development of the Telecommunications Regulator

<table>
<thead>
<tr>
<th>Year</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1945</td>
<td>Telecommunications sector was formally created to serve as administrative tools</td>
</tr>
<tr>
<td>1972</td>
<td>Telecommunications sector was considered as both administrative tools and an economic sector. Both administration and business function were authorized to a single organization</td>
</tr>
<tr>
<td>1990</td>
<td>Regulatory and business functions were separated, though the two related entities were under the control of the Ministry of Transportation</td>
</tr>
<tr>
<td>1992</td>
<td>A ministerial agency named the DGPT was created to carry out regulatory and policy making function.</td>
</tr>
<tr>
<td>1993</td>
<td>A decree on rights, responsibilities and structure of the DGPT was released, under which the single telecommunications operator was treated as a functional division of the DGPT</td>
</tr>
<tr>
<td>1996</td>
<td>The DGPT was restructured. A newly decree on its responsibilities and structure was issued, the single operator was structurally separated from the DGPT</td>
</tr>
</tbody>
</table>
2002 The DGPT was restructured as the MPT. A decree on responsibilities and structure of the MPT was issued in the same year.

Source: author

Since 1990, the telecommunications regulator has been authorizing to be both a policy maker and a regulator. It is in charge of drafting bills, policy and strategies to submit to the Cabinet for approval, interpreting such laws and policy, and governing telecommunications sector.

4.1.2 Initiating Competition via Licensing

Mobile competition is introduced via licensing activities, then rules and regulations on licensing, as well as the function of the telecommunications regulator in licensing act as decisive role in initiating competition.

“In Vietnam, mobile licenses are granted under the form of individual acquisition licenses. After receiving acquisition licenses, mobile operators have to apply separately for numbers and spectrum licenses. However, under the applicable rules and practices, once an applicant receives an acquisition license, that successful applicant will be semi-automatically awarded numbers and spectrum licenses, because one of the license selection criteria is the feasibility of telecommunications scarce resources allocation to that selection. In other words, when approving an application for acquisition license, the regulator has already confirmed the availability of a block of numbers and spectrum to that applicant. The development of institutional reform in Vietnam is also accompanied with the country’s WTO accession; therefore, this part mainly addresses mobile acquisition licensing issues under the impact of the WTO accession” (Tran Nhat Le and Obi Toshio, 2007).
“Development of the telecommunications regulatory framework has a close relationship with mobile licensing practice in Vietnam. The licensing framework is primarily defined in the following legal documents:

- documents promulgating telecommunications regulator’s structure, its rights and responsibilities, which normally include licensing responsibility of the regulator; and
- documents regulating the telecommunications sector that define the licensing procedures.

Historically, mobile licensing regimes can be divided into 3 periods based on the development of telecommunications regulations and such regimes have a close connection with mobile licensing practices as analyzed below” (Tran Nhat Le and Obi Toshio, 2007).

**Mobile Provisioning without License – Prior 1996**

In October 1992, the DGPT was established to act as the posts and telecommunications regulatory and policy-making agency. “The DGPT’s structure and obligations were defined in the Governmental Decree No. 28 dated May 1993. However, until 1995 telecommunications services provisioning was managed under a monopoly mechanism while the regulatory and operation functions were still not fully separated. This point of view was legally reflected in the applicable framework, in which terms such as "market" or "competition" were not referred to and the regulator’s licensing responsibility was limited solely to issuance of licenses to private networks; VNPT was one of the functioning segments of the DGPT and the exclusive telecommunications carrier; and further, VNPT could provide services to the public without licenses” (Tran Nhat Le and Obi Toshio, 2007).
From 1992 to 1995, VNPT built and operated two mobile networks: Callink and MobiFone. “Since there was no legal document regulating licensing issues, Callink and MobiFone were operated without licenses for couple years under the control of VNPT” (Tran Nhat Le and Obi Toshio, 2007).

“The year 1995 represents the theoretical shift from monopoly to competition in the telecommunications sector as a whole and the mobile market in particular when the Prime Minister allowed two companies: Vietnam Military Electronics and Telecommunications Corporation (Viettel), and Saigon Posts and Telecommunications Corporation (SPT), to build networks and provide domestic and international telecommunications services in June and December 1995” (Tran Nhat Le and Obi Toshio, 2007), respectively as shown in Figure 4-1.

Figure 4-1. Legal Framework and Mobile Licensing to 1995
“The most critical aspects of governing telecommunications in this period were the establishment of a regulatory agency for the first time and the authorizations of the regulatory and policy-making functions and business operating function to separate entities. However, several deficiencies were observed: the absence of a legal framework to authorize telecommunications licensing duties to the regulator and the necessary procedures to undertake such an authorization; the consideration of the only operator as functional segment of the regulatory agency. As a result, the only operator began establishing networks and providing services without a license; meanwhile two new corporations could not receive licenses for few years even though they had been allowed to do business in the telecommunications sector. Permissions that allowed two new corporations to enter the mobile market could be viewed as ad-hoc since no particular legal document existed that addressed such permissions” (Tran Nhat Le and Obi Toshio, 2007).

**Sound Licensing Period from March 1996 to May 2002**

“In order to overcome the observed deficiencies as analyzed above, a new governmental decree (Decree No.12) that authorized licensing obligations to the DGPT was issued in March 1996. Subsequently, licensing procedures were stipulated in Decree No.109/1997, which had become into effect from November 1997; and detailed by the DGPT's Circular No.04/1998. Relating to licensing procedures, these legal documents only provided criteria to choose qualified applications; they failed to stimulate
any criteria on how to evaluate and select a successful applicant. Time to screen applications could not be exceeded 90 days from the day of their receipt, and the license duration was fixed as less than 20 years in case of applying to establish a network to provide services. A nominal fee, equivalent to approximately 1,570 US dollars, was applied since January 2001 to all successful applicants” (Tran Nhat Le and Obi Toshio, 2007).

“During this period of time, four licenses were granted to 3 different mobile applicants. Of these 4 licenses, 2 of them were granted before the effective date of the legal basis for licensing procedures: those were held by VNPT (issued in June 1996 and deployed under the trademark VinaPhone) and Viettel (issued in January 1998 and provided services under the trademark Viettel Mobile from October 2004). Since legal descriptions pertaining to licensing procedures were not in effect at the time it reviewed the subject applications, the regulator freely decided to grant the licenses to VinaPhone and Viettel Mobile based on its own consideration. This free consideration and decision was most visibly reflected in the terms and conditions of these two license durations: VinaPhone was granted a non-duration license, while Viettel was granted one with 20-year-duration. In May 1997, the regulator continued to allow SPT to provide mobile, wireless local loop and paging services in a bundled license. This bundled license was separated in April 2002, when SPT was awarded a license to operate a mobile network, which is schedule to expire in September 2016. Another 15-year-license was granted in May 2000 to MobiFone – the network that is owned by VNPT and started providing services without license in 1993” (Tran Nhat Le and Obi Toshio, 2007) as pointed out in Figure 4-2.
Figure 4-2. Milestone of Licensing Process from 1996 to May 2002

|------|------|-----|------|------|------|-----|------|

- Issuance of Decree No.12 on the DGPT’s structures and responsibility.
- Defined regulator’s licensing duty.
- VinaPhone received a non-duration license.
- SPT awarded a non-duration mobile license.
- Viettel received its separate mobile license.
- Issuance of Decree No.109 on Posts and Telecommunications.
- Defined basic provisions of licensing.
- MobiFone received a 20-year license.
- Viettel received a 15-year license.
- SPT received a 15-year license.
- Issuance of Decree No.109 on Posts and Telecommunications.
“Compared to the scenario in the previous period, the most significant achievement of licensing regime in the second period was the creation of a basic legal framework to deal with licensing issues for the first time and the resulting issuance of 4 mobile licenses to different applicants. Further, the framework authorized licensing responsibilities to the regulator on a very broad scale and ensured independency of the regulator in licensing: the regulator could self-review and screen applications based only on the legal prescriptions” (Tran Nhat Le and Obi Toshio, 2007).

“However, such framework was shown numerous deficiencies: it exclusively classified as by-law documents of the Executive Branch since the Government and/or ministerial agencies initiated all of the elements of the framework. Further, the framework was not fully transparent: it defined conditions to apply for a license, time for considering applications and duration of licenses, but did not include criteria for evaluating and choosing successful applicants for a license. Thus, the regulator could freely choose a successful applicant based on its own evaluation. It appears that the framework seemingly concentrated on surmounting existing problematic licensing issues (i.e. focused on providing the regulator with legal tools to award licenses to entities that had already been allowed to do business in telecommunications sector), but neglected to address prospective aspects of licensing issues in any detailed manner and were not formed by using WTO rules on telecommunications as direction. Additionally, in some cases, the regulator even granted licenses by applying prescriptions on its licensing authorization while stipulations on licensing procedures still had not been enacted (such was the case of licensing to VinaPhone and Viettel Mobile). Non-transparency of the legal framework and the flexibility of implementing licensing duties completed by the DGPT can be seen via the various durations of the four mobile licenses exhibited in Figure 2. On the other hand, due to the lack of license selection criteria, the two new licensees (Viettel and SPT) were not quite qualified and were financially incapable of starting operations on time, thus they could not provide services as licensed for 5-6 years” (Tran Nhat Le and Obi Toshio, 2007).
“Although Vietnam applied for WTO membership in 1995, regulations on mobile licensing procedures in this period were unclear and significantly incompatible with the WTO rules and regulations” (Tran Nhat Le and Obi Toshio, 2007).

**Licensing from June 2002 – Legal Framework and Practice**

“Before June 2002, there was no telecommunications legal document issued by the constitutional branch, while the constitutional branch is "the supreme State authority … and the sole organization in charge of … law-making function” (WTO, 1998, pp.78). Under Vietnamese legislation, legal documents enacted by the constitutional branch have higher legal effect than those of the executive branch and in cases where discrepancies exist among legal documents the higher effective documents will be applicable. For that reason, availability of complex laws issued by the constitutional branch and in conformance with WTO rules becomes one of the basic conditions to ensure success in the WTO accession negotiation process” (Tran Nhat Le and Obi Toshio, 2007).

“In addition, the lack of licensing selection criteria created an unpredictable licensing regime during the second period. In 1999, after reviewing Vietnam’s institution on trade in services, the WTO concluded that there were too many vagaries inherent in the existing regulatory process” (Tran Nhat Le and Obi Toshio, 2007) and stated that, ”Vietnam must give serious consideration as to how to establish more predictability and transparency in its regime” (WTO, 1999, pp.168).

“In 2001, Vietnam responded that together with other relating laws, the constitutional branch would enact an ordinance on posts and telecommunications “in conformity with WTO regulations on trade in services” within the Legislation Program 2002-2003 (WTO, 2001, pp.3). Such an ordinance was promulgated by the Standing Committee of the National Assembly in June 2002 to replace Decree No.109/1997. Additional telecommunications issues that were addressed by the Ordinance are further detailed by Decree No.160/2004, as approved in September 2004. In August 2002, the
regulator and policy-maker (DGPT) was reorganized into the Ministry of Posts and Telematics (MPT). The current licensing framework is mainly created by Ordinance No. 43 and Decrees No. 90 (on the MPT’s structure and responsibilities) and No. 160 (on Telecommunications)” (Tran Nhat Le and Obi Toshio, 2007).

“Based on the above legal framework, 2 new mobile licenses were granted. Hanoi Telecom received its 15-year-mobile license in 2003, and in 2005 a 15-year-BCC valued 655 million US$ between Hanoi Telecom with Hutchison Vietnam, a subsidiary of Hutchison Telecom, was approved. Meanwhile, EVN Telecom (Vietnam Power Electric Telecommunications Company, a subsidiary of Vietnam Electric Corporation) obtained a 15-year-mobile license in November 2004. The following figure illustrates milestones of legislative development and results of licensing activities from May 2002 to date” (Tran Nhat Le and Obi Toshio, 2007).

Figure 4-3. Licensing Activities and Current Licensing Framework

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<tr>
<td>Issuance of Ordinance on Posts and Telecommunications</td>
<td>Restructure of the regulator from DGPT to MPT under the National Assembly Resolution</td>
<td>Issuance of Decree No.90 on the MPT’s structure and responsibilities which defines MPT’s licensing duty</td>
<td>Hanoi Telecom received 15-year license</td>
<td>EVN Telecom was awarded 15-year license</td>
<td>Telecommu nications. 15-year Details licensing procedures</td>
</tr>
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</table>
“From June 2002, the telecommunications legal framework has been further improved by the enactment of a constitutional branch’s ordinance on posts and telecommunications in which the WTO rules – for the first time - were used as guidelines for drafting the Ordinance. The current applicable framework has overcome the most significant deficiency that was observed in the previous regulations: it provides a set of criteria to choose a successful applicant for a license. However, the current framework reflects a considerable step backward in comparison with the previous one: while in the second period (from 1996 to May 2002), the regulator independently exercised licensing activities based on a legal basis, the new framework requires collective cooperation between the telecommunications regulator and other ministerial agencies in reviewing applications for a license. In addition, it is for a requirement that the MPT to obtain the Prime Minister’s approval regarding a decision on successful applicants before issuing a license. Further, it does not define clearly time needed to evaluate applications for a license as the framework of the second period. The backwardness and deficiencies of the current licensing regime will be analyzed” (Tran Nhat Le and Obi Toshio, 2007) in detail in the next sub-chapter.

**Evaluating Current Licensing Regime**

“The WTO rules on licensing will be employed to evaluate the transparency and workability of the Vietnam’s current licensing regulation in order to understand how far institutional reform supports mobile competition” (Tran Nhat Le and Obi Toshio, 2007).

“It would be impractical if this analysis were limited only to analyze the transparency and workability of the current licensing regime while such regulation would not be possible to apply in the future. However, there are several licensing challenges that the regulator must face in the future, and analyzing inappropriate points of the
current regulatory regime in order to revise and amend it in a more applicable manner is necessary for the following reasons” (Tran Nhat Le and Obi Toshio, 2007).

“First, among 6 existing licenses, only VinaPhone’s license was granted without any specific duration” (Tran Nhat Le and Obi Toshio, 2007) (see Table 1). That situation was acceptable at the time the license was issued (1996 as shown in Figure 2), “when matters such as competition and rights to trade in services were not properly considered. Nowadays, Vietnam’s mobile market is shifting towards a more competitive phase and it is imperative that VinaPhone’s license duration be clearly decided and specifically defined in its awarded license. A specific definition of VinaPhone’s license duration is required in order to protect the rights of other mobile network carriers, as well as domestic and foreign investors, especially when the mobile market in Vietnam is going to be further liberalized and opened directly or indirectly to investors in the near future, when foreign investors can directly establish a joint venture to provide mobile services or indirectly buy equity shares of the operating mobile operators when such operators are listed in the Exchange Stock Market” (Tran Nhat Le and Obi Toshio, 2007).

“Second, previous licensing practices were done on a case-by-case basis. In other words, at time of reviewing application(s) for a mobile license, only one application was filed and the applicant did not have to compete with others for a license. In that circumstance, the lack of well-designed selection criteria might not strongly affect licensing activities since the regulator did not have the burden of comparing among applications to choose the best. All six mobile networks in Vietnam are being deployed on spectrums dedicated for second generation (2G) networks. The MPT Vietnam has confirmed that the spectrum available for 2G mobile communications has been exhausted and that it is impossible to allow additional mobile operators to use the 2G spectrum15 (MPT, 2005). This means that there is no challenge for the regulator in the licensing issue if mobile operators satisfy customer demand with 2G services provisioning,

including voice, Short-Message-Services (SMS) and a few low-speed Internet access services, such as downloading ringing tones and wallpaper screens. However, when future mobile subscriptions increase to a level that the network architecture depletes existing capacity and 2G spectrums are not available for expanding the network, or when customers demand higher quality and various additional mobile data services, the operators will need to use spectrums dedicated to third mobile generation (3G) to meet market demands. Meanwhile, the available 3G spectrum in Vietnam will only support four networks\textsuperscript{16}. Sooner or latter, Vietnam will have to face a new licensing situation where either the number of applications exceeds the number of supportable networks, or several applications are filed simultaneously. That potential circumstance requires Vietnam to amend and revise its licensing regulatory regime in a timely manner in order to more effectively regulate licensing activities in the future” (Tran Nhat Le and Obi Toshio, 2007).

“Third, the regulator’s licensing duties and responsibilities are not limited to issuing licenses only, but extend to managing proper implementations of the license’s terms and conditions of the respective licensees after issuance. Supplementing and amending the current licensing regime will contribute to timely implementation of licenses when more detailed and quantitative criteria are designed for choosing qualified and successful applicants. Vietnam has had negative experience with cases where license’s deployment was unwarrantedly delayed for couples of years (note for example the cases of Viettel Mobile and SFone). Such delays, on the one hand, showed the ineffectiveness of the licensing practice, and on the other, caused doubts to investors about the feasibility of Vietnam’s mobile projects” (Tran Nhat Le and Obi Toshio, 2007).

\textbf{WTO Rules on Telecommunications Licensing}

“Relating to telecommunications sector, WTO rules are defined in the General Agreement on Trades in Services (the GATS), the Annex on Telecommunications

\textsuperscript{16}
(attached with the Fourth Protocol), the Reference Paper and specific commitments by members. Of those, GATS, the Annex on Telecommunications and specific commitments are binding obligations, whereas the Reference Paper is considered as additional commitments” (Tran Nhat Le and Obi Toshio, 2007).

“Two main WTO rules concerning telecommunications are Most-Favored-Nations (favor one, favor all) and transparency (all domestic regulations must be made publicly available). While telecommunications technology development creates borderless-services provisioning worldwide, barriers to market entry, for instance licensing, may be used as one of the domestic regulatory tools to restrain such borderless provisioning” (Tran Nhat Le and Obi Toshio, 2007). “The Most-Favored-Nations rule aims at broadening national markets, while the main objective of the transparency requirement is to abolish undue market entry barriers that may be established by ETO members and to harmonize telecommunications institutions globally” (Mathew B., 2003; Fredebeul-Krein M. & Freytag A. 1997). Paragraph 4 of the Reference Paper specifically outlines the rule of transparency requirements pertaining to licensing as follows (WTO, 1996(a)):

“Where a license is required, the following will be made publicly available:
(a) all the licensing criteria and the period of time normally required to reach a decision concerning an application for a license; and
(b) the terms and conditions of individual licenses.
The reasons for the denial of a license will be made known to the applicant upon request”.

“In brief, Paragraph 4 of the Reference Paper requires WTO members to provide the public with: 1/ licensing criteria for obtaining a license (i.e. selection criteria that are requirements the regulators apply to decide successful candidates (Invent H., 2000), 2/ time needed to review and give a decision after applications are submitted; and 3/ terms and conditions of awarded licenses. Reasons for denial are also required to be provided, if requested” (Tran Nhat Le and Obi Toshio, 2007).
Current Regime under the Light of WTO Rules

“The above analyzed three WTO requirements that will be employed to evaluate the conformity of Vietnam’s current mobile licensing regime which primarily consists of two 2 major documents: Ordinance No. 43/2002 on Posts and Telecommunications 2002, and Decree No 160/2004” (Tran Nhat Le and Obi Toshio, 2007).

Transparency of License Selection Criteria

“Promulgations pertaining to licensing criteria can be found in Ordinance No. 43/2002 and Decree No.160, including not only qualification criteria for accepting an application, but also selection criteria for determining successful applicant(s). Defining selection criteria for choosing successful applicants is an improvement of the current licensing scheme, since the legislation in 1996-2002 period failed to address this topic. Qualified applicants as stated in Article 38 of Decree No. 160/2004 are:

- being state companies, or companies in which the State holds dominant or decisive shares;
- having adequate financial and professional manpower capabilities suitable to the scale of the schemes for execution as licensed;
- having feasible technical plans on network development and services provision plans in compliance with current regulations on interconnection, scarce resource usage, services tariff, technical standards, and services quality;
- having contingency plans for assuring safety when technical incidents occur; and
- having equipment, facilities and technical plans for assuring network safety and information security.

Meanwhile selection criteria to choose successful applicants are listed as 4 conditions” (Tran Nhat Le and Obi Toshio, 2007) (hereinafter called criterion 1, 2, 3 and 4):
1/ licensing to such applicant(s) shall be granted only when the allocations of telecommunications scarce resource is feasible (Article 46.1 of the Ordinance);

2/ licensing to such applicant(s) shall be implemented only after receiving the Prime Minister’s written approval for such licensing (Article 46.2 of the Ordinance);

3/ licensing to such applicant(s) shall be in compliance with the current telecommunications development strategy and master plan (Article 36.1 of Decree No. 160); and

4/ priority is given to applicants that have a high feasibility of deployment with commitment to provide services to the masses for the long term; applications for providing services to remote and mountainous areas; applications for providing universal services (Article 36.2 of Decree No. 160).

As shown above, financial and technical requirements are set forth as “qualification criteria to eliminate weak financial and inexperienced applicants. In the next step, comparative evaluation which is based on a set of 4 criteria is used to select successful applicants. Of those criteria, the first 3 are binding and the last one is an alternative criterion. Generally speaking, an evaluation scheme based on a set of 3 binding and 1 alternative criteria provides both predictability and transparency, because applicants can prepare well in advance in order to get significant advantages for their licensing submissions and the regulator can easily choose the best applicant by using the alternative criterion” (Tran Nhat Le and Obi Toshio, 2007).

“The only alternative one is criterion 4, which aims at encouraging applicants that promise to provide services in larger coverage areas with faster speed of deployment or applicants that have exhibited a universal services provisioning orientation. This single alternative criterion is well-designed because it has both alternative and quantitative characteristics” (Tran Nhat Le and Obi Toshio, 2007).
“Among the 3 binding criteria, criterion 1 is quantitative and the easiest to review since confirmation can be given only by reviewing current usage of numbers and frequency. Meanwhile, both criteria 2 and 3 are qualitative and can raise discussions on the fairness of choosing a satisfactory application. Criterion 3 aims at reaching harmonization between deployment of a proposed network and the current applicable strategy and plans. However, this requirement is practical only if such strategy and plans are clearly-defined and well-established, while the applicable strategy and plans in Vietnam contain “general contents” (UNDP and MPI Vietnam, 2006, pp.46) and have conflicting objectives17. Due to such uncleanness, criterion 3 may push the regulator to a matrix of different documents and create more difficulties in selecting successful applicants. On the other hand, criterion 2 hands the final licensing decision to the Prime Minister when no selecting criterion for the Prime Minister’s approval exists. Normally, the Prime Minister will refer to opinions from responsible ministries and agencies on the applications to give final decision. If criteria for Prime Minister’s decision are added, it will lead to a more complicated licensing regime by using “bridging criteria” (Tran Nhat Le and Obi Toshio, 2007).

“In order to create a more appropriate set of selection criteria, decentralize regulatory activities (telecommunications licensing in this case) and increase independency in licensing, it is imperative that criteria 2 and 3 be re-evaluated and revised. Criterion 3 has to be revised in a more predictable and transparent manner by setting forth specific measurable indicators to eliminate unqualified applicants” (Tran Nhat Le and Obi Toshio, 2007).

“On the other hand, criterion 2 should be replaced by a new comprehensive licensing procedure to serve as a basis for the regulator to examine applications for a license. A joint-scheme among related agencies in further evaluating applications which had basically satisfied technical requirements appears to have been designed by

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17 Such conflicts can be found between the Posts and Telecommunications Development Strategy to 2010 and toward 2020 (Decision No. 158/2001/QD-TTg of the Prime Minister dated October 18, 2001) and Information and Communications Technologies Development Strategy to 2010 and toward 2020 (Decision No. 246/2005/QD-TTg of the Prime Minister dated October 6, 2005) on the developmental objectives.
observations and learning experiences from previous licensing practices. In the previous stage, the legal “corridor” for licensing was quite flexible; there were no selection criteria to select successful applicant and licensing was done on a case-by-case basis. Consequently, the regulator might need outside opinions to confirm the appropriateness of its decisions during that stage. However, legalization of such ad-hoc procedures could lead to a more complicated licensing regime and create dependency of the regulator on other agencies. Replacement of the current complicated administrative licensing procedures with more simplified ones, which authorize the sole responsibility for reviewing applications and selecting successful applicants to the regulator will result in more transparent and practical licensing procedures. This approach would also ensure independency of the regulator in managing licensing issues” (Tran Nhat Le and Obi Toshio, 2007).

Transparency of Time to Reach a Decision Concerning the Application for a License

“Procedures and time for application screening are established in Article 39.2 of Decree 160. This Article classifies application screening into 2 cases:

Case 1: MPT accepts and evaluates application during 75 days from the day of receiving qualified application. MPT will review whether proposed project referred in the application is in compliance with the national telecommunications development strategy and satisfies technical standards. If such requirements are not met, MPT shall inform applicant of its refusal in written document in which reason(s) for such refusal are clearly stated.

Case 2: if the proposed project basically satisfies technical requirements and is in compliance with the national telecommunications strategic plan, the MPT shall consult with relevant ministries and agencies about awarding license for such application, then submit application together with all concerned opinions to the Prime Minister for a decision. In case of receiving written approval from the Prime Minister for awarding license to such applicant, the MPT shall issue license during the 15 days following receipt of the Prime Minister’s approval” (Tran Nhat Le and Obi Toshio, 2007).
“The duration of 75 days for reviewing application as described above is applied to Case 1. However, there is no screening duration to apply to Case 2. Furthermore, Case 2 does not describe in which aspects MPT should consult with other ministries and what exactly the regulator should do in case the Prime Minister refuses to approve license to the related application. Lack of specific duration of review period applied to Case 2 has caused unfairness to applicants when their applications were considered in different screening durations. In April 2003 and November 2004, two licenses were granted to Hanoi Telecom and EVN Telecom respectively; the time needed to review their applications varied from 3 months in the case of EVN Telecom to 6 months in the Hanoi Telecom case” (Tran Nhat Le and Obi Toshio, 2007).

“The WTO Reference Paper defines a qualitative requirement regarding licensing duration, which is “the period of time normally required to reach a decision concerning an application for a license” must be transparent. The term “normally” is unspecific and allows host countries to flexibly decide durations that are suitable for their own situations. However, in the case of Vietnam, the lack of providing a specific period of time to cover all licensing cases is noncompliant with WTO regulations. A delay in issuing licenses may become problematic for mobile business, especially in an era of rapid technological development” (Tran Nhat Le and Obi Toshio, 2007).

Evaluating License Mechanism

“The licensing regime in Vietnam has been gradually improved during the last 14 years and can be divided into 3 developmental periods. The goal of each subsequent period’s framework was to overcome all observed deficiencies in each previous period and helped the regulator to deal with the difficulties that it had faced before. However, a number of additional deficiencies have surfaced in each subsequent period’s framework and created new difficulties for the regulator in managing licensing. It appears that the improvements of each subsequent framework were initiated mainly by the intention of
overcoming the previously observed deficiencies, and it further appears that these actions were undertaken without foreseeing the complete scenario of licensing challenges that lay ahead and addressing all required elements of a transparent and predictable licensing regime” (Tran Nhat Le and Obi Toshio, 2007).

“Initially, there was an attempt to create a very basic legal corridor for telecommunications business activities by separating the regulatory and business functions, but it did not provide licensing authorization and licensing procedures. Subsequently, the framework concentrated on overcoming the two deficiencies on licensing authorization and licensing procedures that were observed in the first period. Such licensing authorization generated independency for the regulator in handling licensing, but the licensing procedures were not transparent” (Tran Nhat Le and Obi Toshio, 2007).

“The current applicable framework was thought to have overcome all previously observed deficiencies: it had been initiated by the constitutional branch; the WTO rules were used as directions to establish the framework; and license selection criteria were set forth for the first time. However, four significant deficiencies have surfaced in the current applicable framework and licensing practice: 1/ it decreases the independency of the regulator by setting up a collective mechanism among various agencies and placing the decisive responsibility for granting a license with the Prime Minister; 2/ it fails to clearly define time needed to evaluate applications for a license; 3/ the framework sets forth unpredictable license selection criteria; and 4/ public disclosure of the terms and conditions contained in awarded individual mobile licenses is not a required administrative procedure” (Tran Nhat Le and Obi Toshio, 2007).

“Although several limitations have been perceived and commented upon, some of Vietnam’s experiences with telecommunications licensing framework and practices could be useful for other developing countries, for example, countries that do not have strong telecommunications competition, sustainable telecommunications legislation and/or have
not fully entered the global economic environment by becoming members of the world largest trade organization” (Tran Nhat Le and Obi Toshio, 2007).

“First, both competition and globalization play important roles in strengthening telecommunications regulatory framework toward a more transparent and predictable process. However, in the case of Vietnam, globalization (governmental wills of acceding to the WTO in particular) acts as a dynamic and critical force in fostering the creation of such a framework” (Tran Nhat Le and Obi Toshio, 2007).

“Second, the mobile market in Vietnam can be considered competitively limited since all mobile operators must be State-owned and private investors (including foreign and domestic private sector) can not invest in the market under various forms of economic transactions. The government employs a paper screening - a comparative approach - but not an auction mechanism in exercising its licensing obligation. Further, only successful applicants have to pay a nominal licensing fee. By using such licensing approach and financial tool to collect licensing fee, the government could avoid having to redistribute annual budget money between the various affected governmental ministries and State-owned entities, and mobile operators could reduce expenses when obtaining a license and deploying their networks. As a result, customers may enjoy services sooner and at cheaper prices” (Tran Nhat Le and Obi Toshio, 2007).

“Third, the current selection criteria to choose successful applicants combine a set of three binding criteria and a single alternative criterion. This combination is theoretically ideal, if all criteria have been designed carefully and transparently, because the regulator can easily select a successful applicant by using the alternative criterion. It is also more predictable for applicants and they can actively draw their proposed plans. Further, the exclusive alternative criterion was designed by using quantitative measures to encourage universal services provisioning, so that it is more feasible for the regulator to both select the best candidate and accelerate the fulfillment of one of the most important regulatory targets” (Tran Nhat Le and Obi Toshio, 2007).
4.1.3 Scarce Resources Management

The spectrum issues have been properly managing by the Spectrum Division under the regulator’s authorization. Likes the case of licensing regulation, legal documents on governing spectrum that dedicates to providing mobile services to the mass were released for the first time in 1997, and the first spectrum allocation plan was released by the Prime Minister in 1998. In other words, the first three mobile networks Callink, MobiFone and VinaPhone – all of them are managed by the VNPT – have been assigned spectrum without detail regulation on spectrum.

In 2002, the National Assembly issued an Ordinance on Posts and Telecommunications, which also covered spectrum issues. Based on the Ordinance, the Cabinet, the MPT and the Ministry of Finance released 8 other legal documents on spectrum allocation plan, procedures on spectrum licensing, formula to calculate and collect frequency usage fees. This framework was employed to assign frequency bandwidth to 4 new mobile operators. In principle, frequency allocation in Vietnam is implemented under the first-come-first-serve method.

Initially, Vietnam reserved the range between 800 MHz- 900 MHz and 1800 MHz– 1900 MHz for mobile services provisioning, including GSM (Global Systems for Mobile Communications) and CDMA (Code Division Multiple Access). Mobile operators are equal in using frequency and, in fact, the spectrum range that was reserved for to GSM technology has been divided equally among the three GSM network operators, while the spectrum that was reserved for CDMA networks has been allocated equally between the two CDMA operators.

The last CDMA network, one in which the Vietnam Power Telecommunications Corporation holds an equity interest, received a frequency allocation for mobile services in the range 450 MHz. This mobile services allocation was made possible after the regulator withdrew the subject bandwidth and re-assigned it from its previously targeted
service category due to its lack of use. In view of the initial frequency reservation for mobile services, this regulator initiative could be considered unique; however, it is primarily viewed by the industry as efficient administration of a scarce resource.

However, one component of the scarce resources --numbering plan -- so far has not been covered by any detailed regulation. The lack of a national numbering plan that clearly defines numbers and prefixes that are to be reserved for different networks and services is causing operators -- especially new entrants -- to passively prepare for their network expansion. The recent unnecessary prolonged arguments among mobile operators on the allocation of new network access codes to the VNPT is a typical illustration of the problems that are being caused by the lack of a numbering plan. Currently mobile network access codes in Vietnam are numbered by 09x, that means maximum 10 different access codes are available. As of January 2006, six different access codes have been already assigned to 6 mobile networks. The incumbent’s application for 2 other mobile access codes in January 2006 caused to a severe argument among mobile operators, since a legal numbering plan does not exist yet and new entrants argued that it was unfair while there were only 2 access codes reserved for the other 4 mobile networks. The new entrants unwillingly satisfied with the regulator’s allocation when this organization declared the intention to reserve numbers from 010 to 017 for mobile access codes (MPT, 2006; Vietnam Net, 2006).

4.2. Nurturing and Accelerating Competition

Once mobile competition was established via licensing and assigning spectrum and numbers activities, the regulator has to nurture and facilitate competition by designing a framework on related issues, of which interconnection and tariff are the two most important ones.

4.2.1 Designing a Framework on Interconnection

To date, the first and only detailed legal document that governs interconnection issues is a guidance granted by the regulator in September 1998. However, this guidance mainly regulates interconnection among PSTNs (Public Switching Telecommunications Network). In 2004, the Government released a decree on telecommunications issues; it contains several articles pertaining to resolution of interconnection disputes among network operators. So far, interconnection has being the main reason for almost all telecommunications disputes. Currently, VNPT, - the incumbent, dominates nearly 99% of the fixed-telephony services market and 72.2% of the mobile services market. New mobile operators have claimed that VNPT used its network advantages and technical barriers to delay/refuse their requests for interconnections to VNPT’s network.

Other related issue – interconnection charge – is also problematic in Vietnam. Since the VNPT is dominating all market segments, interconnecting with the VNPT’s networks is a central issue of business plan of any new operator. The interconnection charge is submitted by the VNPT and approved by the regulator. However, such charge is not designed on cost-based orientation. In addition to interconnection cost, the new entrants have to pay a surplus cost for universal service obligations, which are being implemented by VNPT– the incumbent. Meanwhile, new entrants complain that the surcharge is over-calculated (i.e. too high) and does not precisely reflect universal services expenditures. Recently the universal service obligations were separated from the interconnection charges, and the interconnecting operators have to pay from 3%-5% of their services revenues to a universal services fund managed by the regulator. Although the new universal services payments are set forth and are being collected, the interconnection charges still remain the same, i.e. other mobile operators have to pay interconnection charges at the pre-separation level plus the newly calculated universal services surplus charges.

4.2.2 Managing Tariff
When mobile services were preserved as monopoly provisioning of VNPT, the regulator strictly controlled the tariff. In October 2003, the Prime Minister released a decision on governing telecommunications tariff (Decision No. 217/2003/QD-TTg dated October 27, 2003), which allowed the regulator to approve services charges applied by dominating operators (which defined as operators occupy from 30% of a service market share in terms of subscriptions and/or traffic volume); all other non-dominating operators have the right to freely set forth its services tariff without approval from the regulator.

The application of these promulgations in facilitating mobile competition will be analyzed later, when the research comments on the impartiality of the MPT in managing mobile market.

4.2.3 Standard and Handset Management

In terms of telecommunications technology and facilities, Vietnam is a dependent since the country so far does not initiate any telecommunications technology and is not capable to produce network facilities and handsets. Several joint ventures and wholly-foreign owned enterprises have been established mainly to assemble facilities and equipment, and so far, most of the necessary facilities and equipment have to be imported\(^\text{19}\). The country has set no barrier on mobile network standard and currently, three mobile networks are using GSM technology while the other three deploy their network based on CDMA.

Mobile handsets, the first barrier to customers when they consider subscribing mobile services, are provided directly from the handset manufacturers via its distributing systems. The mobile subscribers are allowed to purchase a handset themselves and register for services with the mobile operators. Mobile handset has never been a barrier to the mobile users in Vietnam in terms of ownership like the case of Japan when it

\(^{19}\) In 2006, a joint venture between Qualcomm and EVN Telecom was established for the first time in Vietnam to produce CDMA handsets, though this enterprise’s products are not purchasable in the market yet
initially provided mobile services. However, since mobile handsets are imported from abroad and have to bear import tax, so that they are still expensive for majority of mobile users.

4.3. Protecting Fair Competition

While initiating, nurturing and accelerating mobile competition is guaranteed by the telecommunications regulator, protecting fair competition is jointly being carried out by the regulator and the Competition Administration Department.

4.3.1 Establishment of the Competition Administration Department

The Competition Law which prescribes rules and regulations to guarantee competition and to prevent anti-competitive behaviors has been released in Vietnam in 2004. The Competition Law also lays down a legal basis to establish the Competition Council, who is responsible for judging anti-competitive behavior cases and under the direct control of the Prime Minister. The Competition Law further sets forth a basis to create the Competition Administration Department (CAD), an entity under the control of the Ministry of Trade and is responsible for a broad range of anti-competitive activities. These two competition organizations were formed in January 2006 by the Cabinet.

The CAD, as decided by the laws and regulations, has to deal with anti-competitive activities in telecommunications, include abuse of dominance, refusal to supply essential facilities, cross-subsidization, vertical price squeezing, predatory pricing, misuse of information, locking-in customers, tied sales and bundling, mergers, acquisitions and other corporate combinations. However, since the CAD has been established for less than a year, a number of disputes between the new entrants and the incumbent can not be brought before the CAD for judgment. Further, the CAD sets more complex procedures comparing to the telecommunications regulator, and such
complication causes to a reluctance to the new entrants when they decide to choose a suitable judging organization.

4.3.2 The MPT and the CAD in Ensuring Fair Mobile Competition

In every competitive telecommunications environment, interconnection is one of the most focused upon issues for regulators, incumbents and new entrants, as well as for end users. For regulators, properly managing interconnection issues will foster the establishment of a fair competitive environment and bring benefits to end-users. For incumbents, interconnection is one of the key factors in maintaining their market position and dealing with competitive expansions. Meanwhile for new entrants, interconnecting with other networks - especially with the incumbent’s network - acts as a most decisive element in their survival once they enter the market. Finally, end users need to be able to connect to all other subscribers, regardless of the variously subscribed to networks, at reasonable prices.

So far, interconnection is the most problematic issue in Vietnam’s mobile market. During the monopoly period, no mobile interconnection dispute was recorded since both of the first mobile networks were under the control of the VNPT, who also dominated the fixed-network. Since July 2003, new operators started providing services; all of them were in need of interconnecting with the incumbent carrier’s networks in order to increase their subscriptions and traffic volume. In response, the incumbent tried to maintain its market share and eliminate the competitive expansion by denying or delaying the provision of interconnecting services to the competitors. As a result, several interconnection disputes were raised between the VNPT and its competitors, and they were brought before the competent authority for resolution. In some cases, the new entrants received favorable decisions after arguing the disputes; in other cases, they did not get their expected outcome. Several specialists and lawyers, when observing the interconnection dispute resolutions in Vietnam, also commented that in addition to the choice of bringing interconnection disputes before the telecommunications regulator, the
new entrants may submit those disputes to the Competition Council – who is responsible for governing compliance with the Competition Law – for judgment\textsuperscript{20}.

By using game theory, particularly under the type of game of skill, this dissertation proves that currently the MPT is better responding to the operators’ requirement in ensuring fair competition than the CAD.

Various types of interconnection disputes are routinely recorded, ranging from disputes raised during the negotiating process on terms and conditions of interconnection agreements to disputes on how to implement such agreements. So far, submitted interconnection disputes in Vietnam have occurred during the implementation period of negotiated agreements between the new entrants and the incumbent when the incumbent always refuses or delays implementing the agreed to stipulations. These breaches of agreement usually consist of the following actions by the incumbent: refusing to provide the Point of Interconnection that was proposed by the new entrants, declining to provide adequate interconnection capacities to the new entrants, delaying the deployment of physical interconnection to the incumbent’s networks, or a combination of these delaying tactics. The incumbent almost always argues that technical difficulties are the primary reasons for its non-compliance with the negotiated agreements.

When deciding to submit a disputed case for a judgment, besides the MPT and the CAD, the new entrants can also choose the Economic Arbitration Center or the Courts for settlement. Since the new entrants can not submit a case simultaneously to multiple settlement organizations, they need to optimize their selection. Characteristics of each settlement option are briefed in Table 4-3 below.

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<th>MPT</th>
<th>CAD</th>
<th>Arbitration Center</th>
<th>Courts</th>
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<tr>
<td><strong>Time to review the case</strong></td>
<td>Min: 90 days</td>
<td>Min: 262 days</td>
<td>Min: 169 days. No clear definition on maximum time limitation</td>
<td>Min: 173 days Max: 300 days</td>
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<td>Max: 120 days</td>
<td>Max: 472 days</td>
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<tr>
<td><strong>Settlement fee</strong></td>
<td>No</td>
<td>Responsible for advance payment. Financial penalty assessed if case is lost.</td>
<td>Responsible for advance payment. Financial penalty assessed if case is lost.</td>
<td>Responsible for advance payment. Financial penalty assessed if case is lost.</td>
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<tr>
<td><strong>Telecommunications professional experiences and knowledge</strong></td>
<td>Yes</td>
<td>No. Examination, investigation and decision fee may be assessed</td>
<td>No Examination, investigation and decision fee may be assessed</td>
<td>No Examination, investigation and decision fee may be assessed</td>
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<td><strong>Potential judgment</strong></td>
<td>Reject to review the case; or Accept to review the case</td>
<td>Reject to review the case; or Accept to review the case with the</td>
<td>Judgment will consist of a single set of opinions that the major arbitrators</td>
<td>Reject to review the case; Accept to review the case.</td>
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<tr>
<td>case:</td>
<td>following possible judgments:</td>
<td>have agreed upon</td>
<td>plaintiff’s requests are either rejected or accepted and the incumbent is mandated to fulfill such requests.</td>
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<tr>
<td>- ask the incumbent to satisfy the plaintiff’s request</td>
<td>- reject the plaintiff’s request</td>
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<tr>
<td>- reject that request</td>
<td>- require the incumbent to satisfy the plaintiff’s request and impose additional punishment to the incumbent. Additional punishments include warning, monetary punishment up to 10% of the previous financial year’s revenue. The incumbent may be further required to re-structure or</td>
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</tbody>
</table>
abolish unreasonable methods applied to the new entrants

Under the game theoretic approach, all possible outcomes to the new entrants when deciding to choose the judgment organization is briefed in Diagram 4-2.
Diagram 4-2 shows that if the new entrants mainly aim at being interconnected smoothly to the incumbent’s network, the optimal choice – in terms of time and financial consumption – is to submit the case to the regulator since the regulator offers the shortest time frame to deal with interconnection disputes and without a fee requirement. All other settlement organizations require plaintiffs to pay an advance payment. Further, these organizations do not have professional interconnection knowledge, especially technical knowledge (the basis that the incumbent carrier always sets forth as reasons for not implementing interconnection stipulations). Consequently, these organizations may need a third party’s opinions to examine and decide technical aspects of the case and the loss that the new entrants may suffer from not being interconnected. The new entrants, as
plaintiffs, are also obliged to pay an examining and deciding fee in advance when an organization other than the regulator is selected. Additionally, completing the case profile as required by other dispute settlement organizations normally takes more time and requires more professional and legal expertise than would be required by the regulator. These two factors (time and financial consumption) are the primary reasons that the new entrants are reluctant to present their cases to any settlement organizations other than the regulator.

The second best choice – in terms of time consumption – is to pursue the case before the Court, while the CAD is the third choice. As mentioned above, several specialists and lawyers have commented that the new entrants could bring their interconnection cases before the CAD for judgment according to the Competition Law. In retrospect, it is noteworthy that the CAD which is responsible for dealing with anti-trust behaviors was only established in January 2006; consequently, this avenue of resolution was not available for interconnection disputes arising in 2005 and before. However, together with forcing the incumbent to satisfy all reasonable and feasible interconnection requests, the CAD has the authority to impose additional penalties, such as monetary punishment, dissolving the incumbent’s dominant position, or organizationally restructuring the incumbent; so for the long run, submitting a case to the CAD could be the most strategic solution to the new entrants. Noteworthy that since the incumbent was established under the government decision, so that in case the CAD plans to impose additional penalty of requiring the restructure of the incumbent, it may have to get consensus from the government in advance. In fact, in this initial stage of competition, the new entrants have merely concentrated on being permitted to interconnect to the incumbent’s networks as soon as possible; therefore, all new entrants chose the optimization and submitted the case to the regulator.

4.4 Evaluating the MPT’s Role in Mobile Competition
The MPT takes part in all mobile competitive stages, from initiating competition to nurturing and ensuring such competition. Particularly, the new entrants tend to choose the MPT in asking for protecting them from anti-competitive behaviors. Due to the historical development of Vietnam telecommunications sector, the MPT had been operated together with the incumbent VNPT in a single organization for decades, and these two entities were structurally separated for around 10 years. The MPT, for such an important role and historical relationship, must be independent and impartial in governing a competitive telecommunications market.

4.4.1 Independence of the MPT

Independence of the regulator will be evaluated by examining its interaction with other state agencies, with mobile operators and with consumers. Four other indicators, those are the availability of a transparent rules and regulations, the implementation of public hearing in carrying out regulatory decisions, the publicity of relevant laws and regulations on the regulator’s website and the capability of decision-makers themselves (i.e. the regulator’s staffs) will be employed to thoroughly measure such independence. All of these indicators and triangular relationship is described in Diagram 1-4, Chapter 1.

Relationship between the MPT and Mobile Operators

The first and foremost issue concerning “independent regulator” is whether the regulatory function is separated from the operating function (WTO, 1996; Invent, 2000, pp. 1-6) and whether these two activities are being implemented by different entities to ensure that their benefits are not mixed and one entity can not play both as a referee and a player.
In Vietnam, all 6 mobile operators are nation-wide licensed, must be state-owned and the MPT is authorized responsibilities of state ownership in state-owned operators\textsuperscript{21}. Nevertheless, the existence of 100\% state-owned capital in 4/6 mobile operators, a majority ownership in the other 2 operators and the above noted authorization does not fully mean that the regulator treats all mobile operators in a fair and impartial manner. There are two major reasons that lead to doubt the independence of the regulator. First, the regulator has a unique relationship with the incumbent Vietnam Posts and Telecommunications Group (VNPT) -- who is operating 2 different mobile networks and dominates mobile market with 75\% mobile market share in 2005 (MPT, 2006) -- because it is exercising ownership rights to the incumbent only, while other relevant ministries and organizations perform such role to the other operators. Particularly, the MPT holds responsibility to propose candidates for all positions of the VNPT’s board of management and has its own representative in that board\textsuperscript{22}. Second, since VNPT operated under a monopoly scheme in all telecommunications services markets until end of 1997 and maintained such a role in mobile market until 2003, hence there is a close personnel relationship between the regulator and the incumbent: many employees are currently working for the regulator previously worked for the incumbent operator, especially the regulator’s high-ranking personnel.

**Relationship between the MPT and other State Agencies**

Theoretically, a regulator has greater independence if it is less interfered by daily political pressure when performing regulatory activities and not wholly funded by the political allocated budget (Invent, 2000; Wu, 2005).

\textsuperscript{21} Article 1, Governmental Decree 90/2002/ND-CP dated November 11, 2002 on the Structure, Rights and Responsibilities of the MPT
\textsuperscript{22} Article 7, Decision 06/2006/QD-TTg dated January 9, 2006 of the Prime Minister on the Establishment of Vietnam Posts and Telecommunications Group
The head of the MPT Vietnam is proposed by the Prime Minister, approved by the National Assembly and appointed by the President\textsuperscript{23}. The Prime Minister can also submit to re-designate or exempt the minister. Nominally, the minister can serve up to the age of 60 (for male) or 55 (for female), except:

- when he/she is a member of the National Assembly (in that case, the individual may keep the position past such age until the term in the National Assembly ends); or
- the Minister is proposed to another position; or
- the Minister did not duly perform the duties and the Prime Minister asks him/her to be exempted\textsuperscript{24}.

In other words, the head of the regulatory agency is not heavily affected by daily political pressure and the Minister has a suitable timeframe to pursue regulatory purposes.

However, the regulator is not fully independent in governing licensing. Procedures and time for screening applications for a license are divided into 2 phases (Article 39.2 of Decree 160):

“Phase 1: MPT accepts and evaluates application during 75 days from the day of receiving qualified application. MPT will review whether proposed project referred in the application is in compliance with the national telecommunications development strategy and satisfies technical standards. If such requirements are not met, MPT shall inform applicant of its refusal in written document in which reason(s) for such refusal are clearly stated ” (Tran Nhat Le and Obi Toshio, 2007).

“Phase 2: if the proposed project basically satisfies technical requirements and is in compliance with the national telecommunications strategic plan, the MPT shall consult with relevant ministries and agencies about awarding license for such application, then

\textsuperscript{23} Article 3, Law No 32/2001/QH10 dated December 25, 2001 on the Structure, Rights and Responsibilities of the Government
\textsuperscript{24} Articles 5 and 20, Law No 32/2001/QH10 dated December 25, 2001 on the Structure, Rights and Responsibilities of the Government
submit application together with all concerned opinions to the Prime Minister for a
decision. In case of receiving written approval from the Prime Minister for awarding
license to such applicant, the MPT shall issue license during the 15 days following
receipt of the Prime Minister’s approval” (Tran Nhat Le and Obi Toshio, 2007).

As shown above, the MPT should consult with relevant agencies and the regulator
can only grant a license to a successful applicant if such licensing is approved by the
Prime Minister. Meanwhile, the legal framework does neither specify terms and
conditions that the Prime Minister should refer to when giving a final decision, nor
indicate which administrative agencies the regulator has to consult with. Such
mechanism causes both dependence and non-transparency of the regulator’s activities.

The MPT is generally funded by the national budget, except some regulatory
sections have an independent financial mechanism such as the Radio Frequency
Department or the National Internet Center; they are fully funded by related collected
fees.

**Relationship between the MPT and Consumers**

In a competitive environment, the regulators’ duties toward users are mainly
ensuring universal access and protecting users’ rights. These two issues are considerably
focused upon by the MPT.

In 2004, the MPT established a Universal Services Fund, which is administered
by the MPT to collect operators’ contribution and various international aids and loans.
All mobile regulators have to contribute 5% of their revenues to the Fund. A surcharge
for universal services obligations is also being calculated into interconnection charges.
The concept of providing universal services in Vietnam is limited to the provisioning of
fixed-telephone services\(^\text{25}\), so that only 4 mobile licensees who are also authorized to

\(^{25}\) Decision 74/2006/QD-TTg dated April 7, 2006 of the Prime Minister on the Approval of the Universal
Services Provisioning Plan to 2010
provide fixed services can indirectly benefit from their contributions to the Fund. In addition to the Consumers’ Rights Protection Association, the MPT is responsible for protecting users’ rights. However, current observations indicate that the users normally do not use this channel to complain about their dissatisfactions with the services provisioning. In case of dissatisfactions, the users normally raise complaints via mass media channels, and mobile services providers may adjust their services as a result of the pressure exerted by mass media.

**Regulatory Decision Making**

A regulatory decision making process can be classified as clear and transparent if it satisfies 4 indicators: availability of legal framework on a regulatory website, implementation of public hearing, availability and applicability of the framework and qualification of decision makers. The decision making process in Vietnam basically satisfy 2 indicators: availability of legal framework on a regulatory website and implementation of public hearing, since all applicable laws and regulations can be found in the regulators’ websites and concerned parties are provided opportunities to raise their opinions on the drafts of many relevant regulations and decisions. However, problematic matters are being observed in the legal framework and regulatory staffs as analyzed below.

**Availability and Applicability of the Concerning Laws and Regulations**

In any mobile competitive environment, licensing, interconnection and scarce resources allocations are considered key factors in facilitating the development of fair competition. Therefore, the availability and applicability of laws and regulations pertaining to these topics will primarily indicate whether regulatory decisions are being well made in pursuit of such competition.
In 2002, an Ordinance on Posts and Telecommunications was approved by the Steering Committee of the National Assembly. The Ordinance provides general rules and principles on governing posts and telecommunications issues, contains articles on licensing, interconnection, spectrum allocation and numbering. Accordingly, the competent ministries released approximately 30 legal documents to detail the Ordinance on related issues. Particularly, of those 30 documents, 8 of them govern spectrum and 6 legal documents dedicate to interconnection issues. However, one component of the scarce resources -- numbering plan -- so far has not been covered by any detailed regulation. Meanwhile licensing is governed by articles of both the Ordinance on Posts and Telecommunications and the Decree on Telecommunications, but none of these documents define criteria to select successful applicants or the period of time to review applications for a license.

**Regulatory Staff**

Together with the availability of a predictable legal framework, impartial and timely regulatory decisions making can be guaranteed if regulatory decision makers are qualified and experienced. However, it appears that the regulator has to address staff qualification issues. The MPT is being funded by national budgets and staff salaries are significantly low in comparison to those of employees in telecommunications industries, so that the regulator is facing difficulties in retaining experienced and qualified staffs as well as recruiting new professional ones. This problem is especially pronounced when foreign offices and mobile operators are trying to attract the regulators’ experienced staffs by offering higher salaries and good promotions. Research completed in June 2004 in Vietnam indicated that in approximately one year (mid-2003 to mid-2004) around 20

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26 This number does not include documents that regulate tariff, since before 2004, each tariff must be approved by a specific legal decision of the MPT and from 2004, all tariff provided by the dominator(s) must also receive such approval.


28 Public servants’ salaries are calculated based on their serving time in the public sector and positions. According to the newest legislation (Circular 02/2006 dated September 15, 2006 of the Ministries of Internal Affairs and Finance), monthly salary of a fresh bachelor graduated staff is 10 times lower than monthly salary paid to a regular telecommunications engineer by foreign companies (http://vietnamworks.com/Newspapers/joblist_oct172006.html)
employees shifted their workplaces from the MPT to Viettel Mobile, a mobile operator that began operations in October 2003 (Hong Mai, 2004).

4.4.2 Impartiality of the MPT

Impartiality in Managing Tariff

At the initial stage of liberalization, the regulator was not impartial toward all operators in managing mobile tariff. When mobile services were preserved as monopoly provisioning of VNPT, the regulator strictly controlled the tariff. In October 2003, the Prime Minister released a decision on governing telecommunications tariff (Decision No. 217/2003/QD-TTg dated October 27, 2003), which allowed the regulator to approve services charges applied by dominating operators (which defined as operators occupy from 30% of a service market share in terms of subscriptions and/or traffic volume); all other non-dominating operators have the right to freely set forth its services tariff without approval from the regulator.

Despite that the above stipulation became into effective from mid-November 2003 as decided by the Prime Minister, but those stipulations could only be applied to non-dominating operators from January 2004, when the MPT issued a guiding document on this issue. The strict control mechanism on tariff was abolished in 2004, and from mid-2004, all mobile operators can freely set forth their own tariff, except MobiFone and VinaPhone, who are so far treated as dominators.

Impartiality in Managing Scarce Resources

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29 In its annual reports in consecutive 3 years, from 2004 to 2006, the MPT continuously affirmed this controversial issue, when the MPT faces to the short of young and professional officials partly due to the salary restraints.

30 The MPT Official Document No 16/BBCVT-KHTC dated January 6th, 2004
Frequency allocation in Vietnam is effected based on the requirements set forth in several legal documents that have been adopted by the National Assembly, the Government and competent ministries. These documents govern spectrum licensing procedures, the frequency allocation plan and frequency usage fees. In principle, frequency allocation in Vietnam is implemented under the first-come-first-serve method.

Initially, Vietnam reserved the range between 800 MHz– 900 MHz and 1800 MHz– 1900 MHz for mobile services provisioning, including GSM (Global Systems for Mobile Communications) and CDMA (Code Division Multiple Access). Mobile operators are equal in using frequency and, in fact, the spectrum range that was reserved for to GSM technology has been divided equally among the three GSM network operators, while the spectrum that was reserved for CDMA networks has been allocated equally between the two CDMA operators.

The last CDMA network, one in which the Vietnam Power Telecommunications Corporation holds an equity interest, received a frequency allocation for mobile services in the range 450 MHz. This mobile services allocation was made possible after the regulator withdrew the subject bandwidth and re-assigned it from its previously targeted service category due to its lack of use. In view of the initial frequency reservation for mobile services, this regulator initiative could be considered unique; however, it is primarily viewed by the industry as efficient administration of a scarce resource.

In brief, Vietnam has a clear and transparent spectrum allocation procedure and this scarce resource was shared equally among operators with impartial and neutral point of view.

Impartiality in Managing Interconnection

Two kinds of mobile-mobile interconnection are allowed by the law: interconnection directly between mobile networks and indirectly via a fixed-network. So far, interconnection has being the main reason for almost all telecommunications disputes.
Currently, VNPT, the incumbent, dominates nearly 99% of the fixed-telephony services market and 72.2% of the mobile services market. New mobile operators—SFone and Viettel Mobile—claim that VNPT uses its network advantages and technical barriers to delay/refuse their requests for interconnections to VNPT’s network. For example, it took SFone 6 months (December 2003 to June 2004) to obtain interconnecting arrangements for the exchange of short messages between SFone’s subscribers and VNPT’s mobile subscribers. In addition, VNPT denied SFone’s request for direct connections to VNPT’s mobile network and required the new company to connect indirectly to its fixed-network. This indirect type of interconnection mechanism requires SFone to pay an additional 1 million US dollars annually for interconnecting with VNPT. In July 2005, Viettel Mobile also engaged in interconnection disputes with VNPT: the incumbent refused to provide enough channels for Viettel Mobile’s interconnection needs, and it refused to allow Viettel Mobile to connect directly to its tandem switches. Viettel interconnection troubles were dealt with effectively when Viettel, through the Ministry of Defense—made a complaint to the Prime Minister; and the Prime Minister gave the Ministry of Posts and Telematics a deadline to arbitrate the dispute. The current interconnection disputes showed that the regulator exhibited reluctance and confusion in dealing with the interconnection issues.

Theoretically, the MPT is neutral to all mobile operators and impartial in the decision making process, based on the reality that the Government has established a target of creating strong competition in telecommunications services in order to increase domestic competitiveness and to be prepared for the post-WTO accession arena. Moreover, the neutrality of the regulator is normally doubted in countries where the incumbent is state-owned, because as a consequence of the natural monopoly mechanism in telecommunications, the incumbent is initially owned by the State, and the next licenses are granted to different private entities. In such a case, telecommunications regulators may favor the incumbent in order to protect the rights and benefits of the State. The telecommunications context in Vietnam is quite different: all mobile operators are State-owned. In this case, no conflict of interest is likely to occur if the regulator
maintains a neutral position towards all operators. However, since the regulator has been authorized some specific obligations in governing the incumbent (such as proposing candidates for positions on the incumbent’s Board of Management and assigning its own representatives to that Board of Management)\textsuperscript{31}, observers and the new entrants have reasonable doubts about the genuineness of this purported neutrality. This dissertation will use game-theory to analyze whether the regulator is impartial in managing interconnection disputes.

Logically in this game, the regulator has 2 move-choices. If the regulator decides to foster fair competition and improve domestic competitiveness, it will choose a pro-competitive move that requires the incumbent to satisfy all reasonable and feasible demands of the new entrants (Pro). In contrast, if the regulator is influenced by the incumbent and tends to protect its market power, the regulator may select a non-competitive move (Con) by denying such requirements and making a decision in favor of the incumbent.

The Incumbent

The incumbent is dominant in all telecommunications sub-markets, ranging from fixed to mobile to leased line services. It operates the largest national fixed-network, has more than a 90% of the fixed-market, and manages two different mobile networks that had a combined 99%, 93.7% and 75% share of the mobile market in the years 2003, 2004 and 2005 (MPT, 2004, 2005 & 2006). Almost all mobile-related entities are employing dependent accounting systems, while cross-subsidy is applied among VNPT international, domestic long distance services, local services and mobile services provided by VinaPhone – one of the two VNPT mobile networks. The VinaPhone network does not have to pay neither interconnection charge when interconnecting with the VNPT fixed-network, nor leased-line fees for its use of transmission facilities because it is a

\textsuperscript{31} This authorization is promulgated in Decree 51/ND 1995 and Decree 199/2004 dated December 2004 of the Cabinet, Decision 265/2006 dated November 2006 of the Prime Minister
dependent accounting entity of the mother corporation VNPT. Further, since VNPT
dominates all telecommunications sub-markets, both of its mobile networks are provided
sufficient capacity and efficient points of interconnection as required in a timely fashion.
This treatment is not in compliance with the recognized worldwide standard, because
VNPT plays as the major supplier in Vietnam telecommunications market, therefore, it
should provide interconnection services to all other operators “under non-discriminatory
terms, conditions … no less favorable than that provided for its… subsidiaries and
affiliates” (WTO, 1996).

During the monopoly period, the incumbent followed Growth-direction: it tried to
develop telecommunications infrastructure by expanding network coverage, increasing
tele-density as defined in the telecommunications strategies and master plans that were
submitted by the regulator and approved by the government. In that context, the
incumbent did not pay adequate attention to profit and operation effectiveness. In fact,
since it is owned by the state, the incumbent did not have to bear any financial burden for
any loss and could keep all profit after taxes for re-investment. As a result,
telecommunications charges in Vietnam were considerably high and the related
productivity was low in comparison with those of other regional countries.
Competition was initiated in the provisioning of Internet services in 1997, and subsequently it was commenced in all other telecommunications services, from long distance to local and mobile services. In that scenario, there should be more effectiveness and efficiency in the incumbent’s operations if it shifts to a Profit-orientation. The incumbent then may have two choices in doing business: continuing the Growth direction, or selecting a Profit direction as the strategic way.

The New Entrants

There are 3 new operating mobile carriers in Vietnam. SPT is a joint-stock corporation in which 87% of the stock is owned by various State-owned companies (it is noteworthy that 18% of those State-owned stocks is owned by the incumbent, VNPT) (VNCI, 2005) and under the administrative control of Ho Chi Minh City’s governing body. Viettel is a wholly State-owned corporation and under the direct control of the
Ministry of Military. The last operating mobile carrier is EVN Telecom (Vietnam Electric Telecommunications Corporation), a wholly State-owned entity under the direct control of the Vietnam Electric Corporation – which is governed by the Ministry of Industry.

For the new entrants, after submitting a complaint, the possible result may either be Win (W) and they can continue to compete with the incumbent, or a Loss (L), in which case if they can not find another solution to overcome their financial difficulties, they will have to quit the game and exit the market. The new entrants, all of whom are managed by different governmental agencies and administrations, may request their controllers – via administrative procedures – to interfere in the dispute resolution process by asking the Prime Minister to hold up the case if they consider that the incumbent is not fair in implementing the interconnection agreements and that the regulator is bias towards the incumbent’s actions.

Possible Outcomes of the Game

As analyzed above, the regulator has two choices: Pro-competitive or Non-competitive; subsequently, the incumbent selects its move either Growth or Profit; and the potential outcome for the new entrants will be a Win or Loss of the case. The following diagram depicts the 8 possible outcomes of the game by combining the various moves of the 3 players.
Relating to the interconnection dispute resolution, the questions are: 1/ what is the real attitude of the regulator in dealing with interconnection disputes; and 2/ what is the best equilibrium that the country should pursue in order to achieve its strategic target; and in that equilibrium, what actions each player should undertake to keep well-informed about the situation.

**Analyzing the MPT’s Attitude**

The MPT’s attitude in dealing with the interconnection disputes is one of the concerned questions in reviewing telecommunications competition. Between 2004 and 2006, 3 main mobile interconnection disputes were submitted to the regulator. This paper examines the regulator’s attitude toward competition by using a roll-back method – from the settlement results back – to decide the regulator’s move.
Since the outcomes of these 3 main disputes have already been verified, we should identify the incumbent’s strategic move, i.e. whether it chose a Growth or a Profit direction.

**Incumbent’s Moves: G is the Choice**

As noted above, the incumbent can choose one of the two moves, keeping a growth direction or shifting to a profit-oriented direction. It appears that the growth direction was the selected move since the incumbent still focuses on expanding network coverage and increasing tele-density; it does not appear to consider productivity and profit as vital elements of its business. The incumbent continues to retain cross-subsidy and a dependent accounting system among long distance, leased-line, mobile and local services. The loss or benefit suffered or gained by providing leased-line services will be counted into the bundled revenue and does not specifically affect to the subsidiaries that operate the backbone network. Further, the incumbent is not financially responsible for any loss, and it can keep all profit for expanding the network. Such a subsidy operation system and financial mechanism is still applicable today even though the incumbent was restructured in January 2006.

This continued use of such financial system indicates that VNPT, to date, has chosen a Growth-oriented (G) direction as its strategic move.

**SPT Case: Point of Interconnection Dispute**

SPT started providing mobile services in July of 2003 and requested to be directly interconnected with VNPT’s mobile networks. VNPT responded by arguing that such requirement could not be implemented due to the technical incompatibility of establishing interconnections between two networks that use different technologies (VNPT uses Global System for Mobile Communications – GSM – for mobile
deployment, while SPT employs Code Division Multiple Access – CDMA – to build its network) and forced SPT to indirectly interconnect via its fixed-network. In that interconnection scenario, SPT had to pay an extra 1 million US dollars in 2003 and approximately 1.4 million US dollars in 2004 for the additional interconnect charges (Nguyen et. al., 2005). In March of 2004, SPT submitted its case to the regulator for settlement and argued that since VNPT had previously provided smooth interconnection between its own wireless networks that were built using different technologies, GSM and Personal Handy System, the currently advanced technical difficulties argument was not a reasonable explanation and that such discrimination was not acceptable. SPT further rationalized that the real reason for the delay was that the incumbent did not want to allow it to interconnect at any feasible point as stipulated by the applicable regulation. The regulator judged in favor of the incumbent, resulting in a resolution game Loss for SPT.

The equilibrium of this case then would be either L-G-Pro, or L-G-Con and that surfaces the primary question of whether the regulator’s move was Pro-competitive or Non-Competitive. The only argued reason for not allowing direct interconnection was technical incompatibility; however, that argument did not appear to be a valid one since the incumbent had already successfully implemented interconnections between its two different technology-based networks. In reply to the above SPT complaint for direct interconnection, the regulator said that it could not review the case until the beginning of 2005 (Nguyen et. al., 2005). Understandably, if the regulator’s move had been Pro, another round of arguments would have been announced and SPT would have likely either won the case or been interconnected sooner. Therefore, the logical equilibrium in this case was L-G-Con, when the regulator chose Con as its move.

Viettel Case: Interconnection Allowance and Adequate Capacity Provisioning

Viettel Mobile commenced providing mobile services in September 2004. A
number of VNPT provincial telecommunications subsidiaries did not allow the Viettel mobile network to interconnect with their local networks. Further VNPT provided less than 50% of the required capacity for Viettel to transit traffic between Viettel mobile and the VNPT network (Khiet Hung, 2005). In June 2005, when several complaints had not been resolved in a timely manner by the regulator, Viettel submitted its case directly to the Prime Minister, and the case was remanded to the regulator for expeditious settlement (Vietnam Cabinet (a) & (b), 2005). Viettel Mobile won the case by a final judgment that was released in July 2005 (MPT (c), 2005).

In this case, the equilibrium must be either W-G-Pro or W-G-Con. Since the incumbent traditionally follows the growth direction and uses technical difficulties to deny implementing interconnection agreements, the new entrants can not win cases if the regulator continues to make Con moves. It appears that finally the regulator’s move was Pro. However, such equilibrium would not have been reached if the Ministry of Military – direct controlling organization of Viettel – had not used its political influences to submit a complaint directly to the Prime Minister. In response to the Viettel complaint, the Cabinet and the Prime Minister confirmed that the regulator was responsible for this interconnection delay and forced the regulator to direct VNPT to provide interconnection services and necessary transit capacity to new entrants (Vietnam Cabinet (a), (b); 2005). Further, the Prime Minister required the regulator to actively review and revise/promulgate appropriate legal documents to foster smooth interconnection and fair competition among operators. There is interpretable evidence that the regulator’s Pro move in this case was significantly affected by the upper levels of governmental interference.

**EVN Telecom Case: Services’ Nature and Adequate Capacity Provisioning**

EVN Telecom started operating in early 2006. In addition to mobile services, EVN Telecom provides so-called fixed-wireless services to customers –communications
services that are licensed to be provided on an intra-city basis communications pursuant to an intra-city tariff. However, due to the inherent advantages of EVN Telecom’s deployed technology, these fixed-wireless subscribers could communicate on an inter-provincial basis while they only have to pay an intra-city tariff, i.e. 2 fixed-wireless customers that are registered in the same city can connect to each other even though they are located in 2 different provinces and only have to pay an intra-city tariff, which is from 2 to 4 times lower than the current tariff applied to post and prepaid inter-provincial mobile services.

Like other new entrants, EVN Telecom was not being provided sufficient capacity for transferring EVN Telecom traffic, and further, VNPT refused to provide short message services to the EVN fixed-wireless subscribers. In June 2006, EVN submitted the case to the regulator for settlement. The regulator judged that EVN’s “fixed wireless” services were actually mobile services and the company should either cease to provide inter-provincial communications, or change the service category from intra-city to mobile services. In case of changing the category from intra-city to mobile services, EVN Telecom can not provide such services pursuant to the current tariff, because the interconnection charge which is collected by the incumbent alone is much higher than EVN Telecom’s current collected fee for intra-city services. Relating to the capacity provisioning request, the regulator directed VNPT to provide sufficient capacity to EVN Telecom in a timely manner (NT, 2006).

This dispute raises another question relating to the incumbent’s financial mechanism. The interconnection charge is approved by the regulator based on the incumbent’s data submission, but the incumbent applies dependent accounting system among subsidiaries and cross-subsidy among its services, therefore interconnection charge can not be calculated based on any direct cost-oriented principle.

The regulator’s judgment in this case exhibited two main issues. First, the regulator chose a Pro-competition move by fostering the provision of transmission
capacity as the new entrant’s requested. In its conclusion of the case, the head of the regulator emphasized that the two parties would cooperate with each other to strengthen the business capabilities of both domestic companies and to be well-prepared for the anticipated fierce competition in the post-WTO arena (NT, 2006). Second, the regulator is perplexed in governing competition in an emerging technological advanced world and still can not thoroughly solve the issue of appropriate cost-based interconnection charge. Additionally, interconnection charges – which are important factors in strengthening competitiveness – are not being properly focused upon by the regulator.

**Suggesting the Best Equilibrium and Players’ Movement**

Since the most pressured issue for the regulator is accelerating fair competition in the telecommunications market and protecting domestic competitive capability when the country has to open this market for foreign investors, as committed to the WTO, the Pro-competition move is obviously the best choice from a regulatory point of view. In order to create fair competition, the regulator has no alternative but to decide fair judgments in all disputes. The regulator should be independent to all operators and should not play any role of ownership to the incumbent as assigned by the current legislation (including the existing personnel relation with the incumbent’s leadership). Further, there exists a need to abolish inappropriate stipulations when dealing with interconnection issues and to make independent decisions regarding interconnection charge and not depend upon the charge solutions submitted by the incumbent.

On its turn, when the regulator confirms its strategic move is Pro-competition and does not use its power to protect the incumbent’s interests, the incumbent will not be able to keep its growth direction; it will then have to shift to a Profit orientation. In order to achieve that shift, the incumbent will need to implement independent accounting systems between all of its subsidiaries and affiliates, cease the cross-subsidy among services, and concentrate on maximizing benefits and increasing productivity.
When the regulator selects Pro-competition move and the incumbent shifts to Profit orientation, the best equilibrium of the game will be Pro-P-W or Pro-P-L, or in other words, new entrants either Win (continue to compete) or Lose (can not survive and will be excluded from the game if they can not show their competitive capabilities). This equilibrium creates win-win-win balance for all players: fair competitive environment is ensured by regulation and active competition can be displayed by different strong carriers. In addition, the state may generate more profit when the incumbent’s objectives are redirected and it becomes a profit-oriented entity.

Subsequently, the second best equilibrium of the game is achieved when the regulator keeps Pro-competition move, while the incumbent still maintains Growth choice, but the new entrants can Win a case if their proofs are acceptable. This pay-off helps to create a competitive environment and maintain the existence of multiple domestic mobile operators in the market.

Finally, all equilibriums that are created by a non-competitive move of the regulator and result in new entrant Losses are not likely to advance in the achievement of the competitive policy and targets set forth by the government.

The game-theoretic analysis showed that at the beginning stage of liberalization (2003), the regulator did not behave neutrally to all operators and seemed toward the incumbent in dealing with interconnection issue. When competition in mobile market has developed, the role of the regulator is improved and the regulator shows impartial point of view in managing interconnection dispute settlement.

4.5 Institutional Reform in Comparative Contexts

The dependence and asymmetric regulations of the telecommunications regulators are evidenced not only in Vietnam but also in other developed and developing countries. The following comparison between the institutional reforms in China, Russia and
Vietnam – where the telecommunications regulators are not independent as required by the WTO and asymmetric regulations are under applications – shows how far institutional intervention affect mobile development.

Telecommunications markets in China, Russia and Vietnam are all managed by the line ministries\textsuperscript{32} and so far, independent telecommunications regulators are not created in these countries. The lines ministries are budgeted by the national fiscal sources and carry out their regulatory functions based on the telecommunications laws and ordinance that were enacted by the legislations, except the case of China\textsuperscript{33}.

Relating to mobile communications, China retains duopoly in the market, when China Mobile and China Unicom get license to build mobile networks. Meanwhile, Russian mobile market is also dominated by the three big national operators, commonly referred to as the Big Three: MTS, VimpelKom and MegaFon; and Vietnam’s mobile market is covered by 6 mobile networks as analyzed in Chapter 3. Though the three countries adopted mobile competition for several years, but each applies different approach in carrying out privatization. China and Vietnam accept mobile competition between the state-owned companies, consequently all of their mobile operators are state-owned (the states hold more than 50% of the equity shares of these mobile operators). In the meantime, Russia is more liberal in privatizing the mobile operators: Russia does not retain any equity shares in the Big Three operators, but keep major shares of the fixed operator Svyazinvest, who is licensed to provide mobile services in 4/7 federal macro regions. However Svyazinvest can not be considered competitor to the Big Three because it provides services in regional scale only and the number of its subscriptions is comparably small to the Big Three.

The governments and the line ministries, based on their attitude towards pro-competition, have interfered differently into the mobile market.

\textsuperscript{32} Those are Ministry of Information Industry in China, Ministry of Information and Communications in Russia and Ministry of Posts and Telematics in Vietnam. All of these ministries are under the direct control of the respective cabinets.

\textsuperscript{33} So far China governs the telecommunications market based on Telecommunications Regulations issued by the State Council in September 2000. In 2001, when China was granted the WTO membership, the country committed to enact a law on telecommunications to govern the market, though so far the bill of law is still under the consideration.
In China, even the mobile market is reserved for state-owned firms like the case of Vietnam, and the incumbent China Mobile (which has been split from the used-to-be monopolist China Telecom in April 2000) maintains a close and influenced relation with the former MPT, but the cabinet has strongly interfere into the market and released decisive resolutions to nurture the existence and development of the second mobile network – China Unicom. China Unicom was created by the three ministries: Ministry of Electronic Industry (MEI), Ministry of Railway and People Army. Visibly in the political viewpoints, China Unicom has more influences in the Cabinet than China Mobile, when the first “has 3 mouths in the Cabinet while China Telecom has just one” (Xu & Pitt, 2002, pp. 80). The Chinese Cabinet also actively financially supported China Unicom by giving it many favorable conditions: imposing low tax, high depreciations rate and flexible and diversified financial resources. China Unicom had received all assets of the China Telecom’s CDMA network Great Wall and Guoxin Paging Company in 1999; consequently, the telecommunications regulator became the largest shareholder of China Unicom. China Unicom has also politically supported in terms of frequency, interconnection, tariff and human resources. By conquering China Great Wall, China Unicom is allowed to use the frequency that allocated for its CDMA. The frequency for GSM network was assigned to China Unicom under the direct intervention from the State Council, when the former MPT was extremely reluctance in assigning frequency for its GSM network. Further, it can offer its GSM services with a 10% lower tariff than that provided by China Mobile. The State Council also actively interfered into the interconnection process between China Unicom with China Telecom and China Mobile to create a smooth interconnection for the mobile competitive provisioning. In 2000, when the MII became the largest shareholder of China Unicom, experienced executives of China Mobile were asked to move to China Unicom in order to facilitate the growth of this new operator (Lu & Wong, 2004, pp. 45).

34 At the time of transferring, China Unicom’s asset valued 2.3 billion yuan, while Guoxin Paging Company’s value was 5 time higher - 13 billion yuan (Lu & Wong, 2004, pp. 45)

35 Such allocation was undertaken when the Vice Prime Minister chaired a meeting to intervene the issue (Xu & Pitt, 2002, pp. 81)
In Russia, two of the most important issues of mobile services provisioning - tariff and interconnection, are flexibly managed by the telecommunications regulator. The Russian MIC has never regulated mobile tariff, and all mobile operators can apply their own prices without any regulatory interference. Interconnection which plays as an essential and decisive factor in accelerating mobile development is simply transited by an immediate firm - Multiregional Transit-Telecom (MTT) who owns a national transit network by integrating all individual mobile and long distance networks. Since each mobile competitor and the fixed network incumbent has its own benefit in interconnecting to each other, and none of them manages the federal transit backbone network, interconnection problem is not emerged as controversial topic in Russia. The most problem mobile issue, so far, is the frequency management. The lack of regulatory decisions on frequency allocation plan and frequency usage fee in Russian Federation causes many troubles to mobile operators in expanding networks and further negatively affects the privatization outcome in Russia. Frequency – as is being treated a national scarce resources – is a virtual asset of the state, and once frequency allocation plan and frequency usage fee is not available, the state will financially lose, where almost all mobile operators are completely owned and controlled by private sector like the case of Russia.

4.6 Chapter Conclusion

Mobile competition can not be realized without the support of institutional reform, which not only creates a suitable legal framework to initiate, nurture, facilitate and ensure fair competition but also establishes/restructures administrative agencies to perform those regulatory activities. The administrative agencies in Vietnam are reserved an important position in shaping public policy, from drafting bills and other relevant decrees and decisions to interpreting those promulgations.
Mobile competition was introduced in Vietnam in 1995, when the Prime Minister allowed two firms other than the incumbent VNPT to build mobile network and provide services. However such allowance can be considered “as ad-hoc case, since there was no particular legal document covered this issue” (Tran Nhat Le and Obi Toshio, 2007) and the licensing duty was not imposed to any governmental agency. Further, the regulator still kept a very close relation with the incumbent VNPT, and VNPT was legally treated as a functional arm of the regulator.

Legal basis for mobile competition was released for the first time in 1996, one year after the introduction of competition, when the Cabinet issued a decree on telecommunications and a decree on the regulator’s rights and responsibilities. The regulator and the incumbent was also structurally separated in 1996, both of them were put under the direct control of the Cabinet. Consequently several legal documents on licensing, spectrum, interconnection etc. were created. Though such legal framework could only be applied in licensing activities, since the competition was not realized until July 2003, then promulgations on interconnection, spectrum, tariff … did not have a chance to confirm their appropriateness.

In order to form more suitable framework to govern telecommunications market in a more global integrated environment, telecommunications framework was renewed in 2002, at first via the restructure of the regulator, then through the enactment of the Ordinance on Posts and Telecommunications, and accordingly, via the issuance of various decisions on interconnection, spectrum, tariff …. This new framework, after 4 years of implementation, has shown several deficiencies as follow:

- The licensing regime is not transparent, since the duration to screen a qualified application is not described. Further, there is no article to regulate criteria to choose a successful application for a license;
• There is a lack of the numbering plan, which clearly define the numbers dedicate to different telecommunications networks and services, and how to assign such numbers;

• A transparent and cost-oriented interconnection charge does not exist to facilitate and ensure mobile competition. Currently interconnection charge is submitted by the incumbent VNPT and approved by the regulator; meanwhile the regulator does not have available database to justify the correctness of such submission, and the VNPT still keeps cross-subsidy scheme among its services. The current management of interconnection charge, thus, is hardly to be considered as pro-competition;

• The regulator at first tended to be in favor of the incumbent VNPT in dealing with services tariff and judging interconnection disputes. Such a non-neutral attitude has changed, but the regulator itself is not independent in managing telecommunications market as a whole and mobile competition in particular. The regulator is dependent on other governmental agencies and the head of the Cabinet in licensing, still maintains a close relationship with the incumbent as a representative of the owner.

Together with the telecommunications rules and regulations, the Competition Law that was enacted in 2004 also plays the role of protecting mobile competition from anti-competitive behaviors. However the Competition Administration Department and the Competition Council - two organizations which are in charge of implementing Competition Law and judging anti-competitive actions - have just created in January 2006. The game theoretic analysis shows that currently, there are more advantageous for the new entrants in asking for the regulator’s judgment on anti-competitive behavioral
cases: the regulator professionally offers a much shorter time to judge interconnection disputes without fee.

The above analysis confirms the second hypothesis of this research: institutional reform has not been adequately considered to timely support mobile competition. Mobile competition was formally introduced in 1995, but except operating permissions of the Prime Minister, no legal basis on licensing, interconnection, spectrum … existed to realize such competition. The first institutional reform activities on telecommunications was undertaken a year later in 1996, and it took years to create necessary rules and regulations to govern a competitive environment.

The current framework on telecommunications that was established from 2002, but such framework does not fully support a competitive environment. In its 2006 annual report, the regulator MPT recognized that the MPT, within its authorization, does not timely draft and enact necessary legal documents to govern telecommunications sector, and there is a plan to build a new law on telecommunications to replace the current applicable rules and regulations.
Chapter 5. PRIVATIZATION POLICY

From 1975 to 1986, Vietnam carried out a centrally planned economic mechanism nationwide, in which the provisioning of goods and services were performed by the state-owned enterprises and at prices set forth by the government. During the centrally planned mechanism period, the domestic private sector was not considered a part of the national economy, and it did not legally exist. Meanwhile, the role of foreign investment in accelerating the national economy was quite limited, partly because the framework to encourage and ensure foreign investment had not been promulgated, and partly because many countries would not invest into Vietnam’s economy because of the US embargo.

After a decade of the nationwide application, the centrally planned economic model began to experience numerous controversial problems that were caused by a serious imbalance between the supply and demand of goods and services, and the country was severely short of financial capital, human resources and requisite technology to further develop the economy. In 1986, economic reform was introduced and a market-based oriented economic model replaced the centrally planned mechanism. As a part of the economic reform, several economic sectors were opened to both domestic private and foreign investors, and the issue of privatizing the state-owned enterprises began being put into the national economic agenda. The acceptance of private participation was legalized for the first time by the enactment of the 1988 Law on Foreign Direct Investment and the 1991 Law on Private Firms, and a roadmap to privatize the state-owned enterprises was also set forth. As shown in the Table 5-1, from 1995 to 2005, the state budget could afford less than 50% of the required investment capital of its enterprises; the remaining necessary capital had to be mobilized from other sources.

Table 5-1. Investment Capital to the State-owned Companies, Divided by Sources (%)

158
<table>
<thead>
<tr>
<th>Year</th>
<th>From State Budget</th>
<th>From Loans</th>
<th>From State-owned Companies</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995</td>
<td>44.6</td>
<td>19.9</td>
<td>12.2</td>
<td>23.3</td>
</tr>
<tr>
<td>1996</td>
<td>45.6</td>
<td>29.3</td>
<td>14.7</td>
<td>20.4</td>
</tr>
<tr>
<td>1997</td>
<td>44.0</td>
<td>23.7</td>
<td>16.8</td>
<td>15.5</td>
</tr>
<tr>
<td>1998</td>
<td>40.4</td>
<td>28.3</td>
<td>17.7</td>
<td>13.6</td>
</tr>
<tr>
<td>1999</td>
<td>41.3</td>
<td>32.1</td>
<td>17.3</td>
<td>9.3</td>
</tr>
<tr>
<td>2000</td>
<td>43.6</td>
<td>31.1</td>
<td>16.3</td>
<td>9.0</td>
</tr>
<tr>
<td>2001</td>
<td>44.7</td>
<td>28.2</td>
<td>17.7</td>
<td>9.4</td>
</tr>
<tr>
<td>2002</td>
<td>44.3</td>
<td>31.1</td>
<td>13.9</td>
<td>10.7</td>
</tr>
<tr>
<td>2003</td>
<td>44.4</td>
<td>31.2</td>
<td>17.2</td>
<td>7.2</td>
</tr>
<tr>
<td>2004</td>
<td>46.9 (preliminary)</td>
<td>30.7</td>
<td>17.0</td>
<td>5.4</td>
</tr>
<tr>
<td>2005</td>
<td>46.6 (estimated)</td>
<td>30.8</td>
<td>17.3</td>
<td>5.3</td>
</tr>
</tbody>
</table>

**Source:** The Vietnam General Statistic Office 2006

In the telecommunications sector, the state also faced a challenge of how to mobilize sufficient capital to build telecommunications networks. There was an extremely financial problem for most of the new mobile entrants after receiving license to provide mobile services. The SPT, the first new entrant received mobile license, registered with around 22.7 million $US, while the second new entrant Viettel had been provided less than 1.5 million $US dollar in 2000, and Hanoi Telecom had registered in 2001 with 500,000 $US only\(^{36}\) (Nguyen, M.H (a) & (b), 2007). With such a modest

\(^{36}\) As talked by the Vice General Director of Viettel Nguyen Manh Hung, in 2000 the company was provided less than 1.5 million $US and it was impossible to deploy a mobile network with such capital. The establishment of Viettel mobile network was realized in 2003, when the company had reserved sufficient profit by providing VoIP services in the previous 2 years 2001 and 2002. See more at [http://www.vnpost.mpt.gov.vn/bao_2007/so01_02/chuyende/t14b1.htm](http://www.vnpost.mpt.gov.vn/bao_2007/so01_02/chuyende/t14b1.htm) and [http://www.vnpost.mpt.gov.vn/bao_2007/so141516/bcvt/t13b1.htm](http://www.vnpost.mpt.gov.vn/bao_2007/so141516/bcvt/t13b1.htm)
amount of investment capital, it was impossible for the carriers to roll out mobile networks for providing services. To deal with the investment capital shortfall, the telecommunications industry has been opened for private participation since 1988. Private investors could establish a joint venture with a state-owned company or create wholly private-owned companies to manufacture, import/export and provide telecommunications facilities. However, this broad acceptance of private participation was not realized in telecommunications service provisioning. Considering telecommunications services provisioning as an important economic sector and a sensitive services segment that can strongly affect the national sovereignty and security (Vietnam Net, 2004, 2005 & 2007), the state, on the one hand, wanted to absorb investment capital from different sources and technological advancement and business experience from foreign partners to facilitate the growth and effectiveness of the telecommunications sector and improve operational efficiency, but on the other hand, it wanted to maintain its influence over telecommunications services provisioning via an ownership scheme and control the capital outflow of the foreign partners.

Though the strategic investors also want to get both benefits from mobile services provisioning and control rights over the operators’ activities. Viewing the mobile market as a privatization scenario game in which the state, the mobile operators and investors are players, this dissertation will analyze the optimal choices in privatizing the mobile operators, explain how and why these stakeholders have chosen their respective strategic moves to date and suggest which moves the investors are likely to select in the future.

37 This point of view is expressed by various high ranking leaders include the MPT’s Minister Do Trung Ta and member of the Steering Committee of the Communist Party Phan Dien. They considered telecommunications services provisioning is an important sector to the national economy and security, and needs to be protected by special ownership scheme. See “Explanation of the MPT’s Minister Do Trung Ta to the National Assembly on the Role of Telecommunications”, available at http://www2.vietnamnet.vn/chinhtri/doinoi/2004/11/351108/ Phan Dien’s speech at the 60th anniversary of Vietnam Posts and Telecommunications, August 2005 http://vietnamnet.vn/cntt/60nambcvt/2005/08/479291/ Vietnam Net interviewed with the MPT Minister Do Trung Ta, Feb, 19, 2007 http://vietnamnet.vn/cntt/2007/02/665501/
5.1 Privatization Game: Defining Players, Their Interests and Their Strategic Moves

5.1.1 The State and the Operators

In the context of this dissertation, the State means the cabinet, which is headed by the Prime Minister, is responsible for initiating and implementing public policy and is delegated as the owner of all state-owned firms. The State is also interpreted as the line ministry, MPT, which is actually the designer and implementer of public policy for telecommunications and is authorized to carry out ownership rights for the incumbent. Further, in relevant cases, the State is understood to be the Ministry of Military, who governs Viettel; the Ministry of Industry, who controls EVN Telecom; and Hanoi and Ho Chi Minh City administrations, who are the direct controllers of Hanoi Telecom and SPT, respectively. Among these agencies, the cabinet and the MPT play the most important role in privatizing the mobile operators, because they are in charge of both shaping and implementing privatization policy, while the other organizations are simply responsible for realizing privatization by applying such policy to their relevant operators.

Currently, Vietnam has 6 mobile operators: MobiFone and VinaPhone are the incumbent’s subsidiaries and 100% State-owned; Viettel is a 100% State-owned firm and controlled by the Ministry of Military; EVN Telecom is a 100% State-owned firm and managed by the Vietnam Electricity Group (Ministry of Industry); SPT is a joint stock firm in which various State-owned companies holds 87% of its equity shares (notably, the incumbent VNPT owns 18% of SPT’s equity shares); and Hanoi Telecom is a joint stock firm, 51% of its equity shares are owned by various other State-owned companies.

The registered capital and ownership hierarchy of these mobile operators are rather complex, even though they are all State-owned entities. The incumbent – who owns 2 mobile networks: MobiFone and VinaPhone – is directly invested by the national budget and governed by the Prime Minister, the MPT and other related ministries. The
incumbent’s registered capital, as recorded in January 2006, was 36,995,000,000,000 VND\(^{38}\) (equivalent to approximately 2.3 billion $US). Meanwhile, Viettel Mobile is directly invested and governed by the Ministry of Military, its invested capital in 1995 (the time when the company was allowed to do business in the telecommunications sector) was 250,000,000,000 VND\(^{39}\) (equivalent to approximately 22.7 million $US), and increased to 950 billion VND\(^{40}\) in March 2005 (equivalent to approximately 59.4 million $US). On the other hand, EVN Telecom is financially dependent upon and managed by Vietnam Electricity Group, which is under the control of the Ministry of Industry. The operator is a dependent-accounting subsidiary of the EVN and annually received investment from this group, who has a capital of around 116 trillion VND (or approximately 7.232 billion $US) at the end of 2005\(^{41}\). Finally, the two other joint stock operators are quite small in terms of financial investment: SPT, who operates the SFone network, has a registered capital of 250 billion VND (or 22.7 million $US)\(^{42}\); and Hanoi Telecom, the company operates HT Mobile network—registered in 2001 with a capital of 8 billion VND\(^{43}\) (or 500,000 $US) as shown in Table 5-2.

### Table 5-2. Mobile Operators and their Ownership Structure

<table>
<thead>
<tr>
<th>Operators</th>
<th>Ownership Structure</th>
<th>Registered Capital</th>
<th>Decisive Authority</th>
</tr>
</thead>
<tbody>
<tr>
<td>VNPT (operates MobiFone and VinaPhone)</td>
<td>100% state-owned. Directly invested by the national budget</td>
<td>2.3 billion $US (2006)</td>
<td>The cabinet and the Prime Minister</td>
</tr>
<tr>
<td>Viettel Mobile</td>
<td>100% state-owned.</td>
<td>59.4 million $US</td>
<td>The Ministry of</td>
</tr>
</tbody>
</table>

\(^{38}\) Article 5, Decision No. 265/2006/QD-TTg dated November 17, 2006 on the VNPT Charter  
\(^{39}\) Interviewed with the person in charge of the firm  
\(^{40}\) Article 1 Decision No. 43/2005/QD-TTg dated March 2, 2005 on the establishment of Viettel Corporation  
\(^{42}\) See the SPT’s business registration at http://www.dpi.hochiminhcity.gov.vn/vie/webappdln/view.asp?id=064090&ht=&loaihinh=DT&HienThi=1  
\(^{43}\) See the Hanoi Telecom’s business registration at http://www.hapi.gov.vn/portals/default.aspx?portalid=11&tabid=146
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>EVN Telecom</td>
<td>100% state-owned. Directly invested by the Vietnam Electricity Group (EVN)</td>
<td>7.232 billion $US</td>
<td>The EVN (under the control of the Ministry of Industry)</td>
</tr>
<tr>
<td>SPT</td>
<td>69% of its equity shares are directly invested by various state companies and organizations, 18% equity shares are owned by the VNPT; 13% privately owned</td>
<td>22.7 million $US</td>
<td>Ho Chi Minh city administrations</td>
</tr>
<tr>
<td>Hanoi Telecom</td>
<td>51% state-owned (various state entities); 49% privately owned</td>
<td>500,000 $US</td>
<td>Hanoi Administration</td>
</tr>
</tbody>
</table>

Although the state is responsible for the regulatory functions and the operators are in charge of business functions, all of the mobile operators are state-owned entities that are directly invested by the national budget (such as the case of the VNPT) or indirectly invested via the national budget allocations to the related ministries and agencies, and their privatization approaches must be approved by the state; thus, the operators’ moves are identical to the state’s strategic moves.
Considering telecommunications services provisioning as an important economic sector and a sensitive services segment that can strongly affect the national sovereignty and security (Vietnam Net, 2004, 2005 & 2007)\textsuperscript{44}, the state, on the one hand, wants to absorb investment capital from different sources and technological advancement and business experiences from foreign partners to facilitate the growth and effectiveness of the telecommunications sector and improve operational efficiency, but on the other hand, it wants to maintain its influence over telecommunications services provisioning via an ownership scheme and control the capital outflow of the foreign partners.

For the first objective – absorbing investment capital from different sources and improving telecommunications efficiency – the state can choose one of two strategic moves. It can select to privatize mobile operators (value 1, since via privatizing, the state can mobilize capital for expansion of the network and learn the necessary business experiences). The state may also decide not to privatize (value 0).

For the second objective – keeping control over the mobile operators and the capital outflow – the state may select to keep its decisive control (value 1) or give up that control (value 0).

In order to mobilize investment capital and retain control over the mobile operators, the state can choose to privatize these operators without equity. In contrast, privatizing the mobile operators will decrease the control rights of the state over the operators although the state still gets benefit from the mobile market.

\textsuperscript{44}This point of view is expressed by various high ranking leaders include the MPT’s Minister Do Trung Ta and member of the Steering Committee of the Communist Party Phan Dien. They considered telecommunications services provisioning is an important sector to the national economy and security, and needs to be protected by special ownership scheme. See “Explanation of the MPT’s Minister Do Trung Ta to the National Assembly on the Role of Telecommunications”, available at http://www2.vietnamnet.vn/chinhtri/doinoi/2004/11/351108/ Phan Dien’s speech at the 60\textsuperscript{th} anniversary of Vietnam Posts and Telecommunications, August 2005 http://vietnamnet.vn/cntt/60nambcvt/2005/08/479291/ Vietnam Net interviewed with the MPT Minister Do Trung Ta, Feb, 19, 2007 http://vietnamnet.vn/cntt/2007/02/665501/
5.1.2 The Strategic Investors

For the analytical purpose of this research, strategic investors refer to the investors who have intentions to do business in the mobile services market under permitted forms of operation. The strategic investors can be divided into two groups: domestic investors or foreign investors; each of these groups has different influences on shaping privatization policy.

Vietnam has implemented economic reform and restructured state-owned enterprises since 1986, but the country is still in the process of privatizing and restructuring its public firms. The Vietnamese private companies posit more and more influence in the economic system although they are not well enough developed to be a significant force in shaping telecommunications privatization policy. Meanwhile, from the foreign investors’ viewpoints, Vietnam’s mobile services market is considered a beneficial and potential segment. Many foreign investors have expressed an interest in investing in this market and they can use their influences with their relevant governments to affect the privatization policy making process in Vietnam via international trading negotiations. Particularly, negotiations on opening telecommunications services market has been a major bargaining point of the negotiation between Vietnam and the US on a bilateral agreement (1995 – 2001) and between Vietnam and other countries on the WTO accession (1995 – 2007). In these two negotiations, access to the telecommunications services provisioning market is one of the most decisive segments in deciding the success of the negotiations (Viet Lam, 2005).

Aim at maximizing their profit when investing in the mobile market, the investors can choose one of the 2 following strategic moves. They can either exit the market if there is no attractive opportunity to do business in the market (value 0), or invest into the operators’ businesses (value 1). Like the State, the investors also want to control the

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45 During the negotiation on the Vietnam’s WTO accession, foreign partners urged Vietnam to quickly and broadly open its market for foreign investment, even in “sensitive” market segments such as telecommunications, banking and securities services. See more detail at http://vietnamnet.vn/chinhtri/doingoai/2005/12/522070/
business activities of the operators in order to improve the operational effectiveness and obtain increased profits; thus, they may be granted controlling rights via an ownership scheme (value 1), or they may not be permitted to interfere with the business process (value 0).

The move that is selected by the investors, as analyzed before, will be chosen based on the state’s moves and then, in turn, the investors’ moves can affect the operators as illustrated in Diagram 5-1.

5.2 The Game Assumption and Payoff Interpretation

Table 5-2 below shows combinations of the stakeholders’ moves and relative payoffs based on the objectives of the stakeholders.

Diagram 5-1. Privatization Game Payoffs
Diagram 5-1 shows 3 nodes: node 1 represents the state, which plays first in the game; node 2 is the strategic investors, who decide their moves based on the state’s decision; and node 3 represents the operators, who are directly affected by the strategic investors’ choice. The state can choose to either privatize without equity or to privatize with equity; consequently, the strategic investors will decide either to accept the state’s offer and invest into the market, or stay out. Lastly, if the investors choose to invest, the operators will receive the necessary capital to commence and expand their services; and contrarily, the operators can not receive any investment capital.

5.2.1 Privatizing without Equity

Diagram 5-1 illustrates that in any case, when the strategic investors decide to stay out and do not invest, none of the other players gets any benefit from their decision. The game can only achieve positive outcomes when the investors select to invest. The state and the mobile operators receive more benefit and advantages once the state decides to privatize without equity and the investors accept that offer. In this case, the state and the operators can maintain full control over the mobile market and get the necessary investment capital and earn benefits (value 2 for each player). Consequently, the investors can only get benefits, but they can not interfere into the business progress and carry out business plans as they desire (value 1). The overall benefit ratio between the state/operators and the investors is 5:1 in this case.

Unlike the approach that has been applied in many countries worldwide: privatizing the incumbent by selling its equity shares on the stock exchange markets and awarding other mobile licenses to private sector, telecommunications privatization in Vietnam was implemented pursuant to a different approach. Telecommunications privatization in Vietnam is more closely aligned with the concept of privatization that Ure and Vivorakij referred to in their research; there is a “process through which private
capital is brought into the Public Switch Telecommunications Network” (Ure & Vivorakij, 1997, pp.10).

To privatize without equity, the State utilizes “contracting out” as its privatization strategic approach in the mobile market. The domestic investors actively participate in the mobile service provisioning process via “outsourcing” activities. They can become the operators’ agents and be in charge of either selling SIM (Subscriber Identity Module) cards/prepaid cards, or they engage in customer services functions. This type of contracting out has been broadly applied since it helps to reduce business costs and increase efficiency. As reported by Viettel (2006), the third largest mobile network in Vietnam, the labor force that participates in the firm’s contracting-out work reached 5,000 workers and equated to 50% of its total workforce (Nguyen M. H. (b), 2007).

For foreign investors, the “contracting out” was mainly implemented via foreign direct investment law. In 1988, the National Assembly enacted a Law on Direct Foreign Investment (FDI) in order to attract foreign capital to stimulate the development of its weak economy. Subsequently, the 1988 Law was replaced by the Law on FDI 2000 and Law on Investment 2005 (the 2005 Law governs both domestic and foreign investment and became effective in July 2006). Several foreign direct forms of investment are permitted by the Law on FDI, for example, establishing joint-ventures or wholly owned foreign companies, signing Build-Operate-Transfer contracts and Business Cooperation Contracts (BCC). Since the State wanted to eliminate interferences from foreign investors, it set forth a limitation on foreign investment in the mobile services provisioning market segment: foreign partners are only allowed to cooperate with the mobile operators under the Business Cooperation Contract (BCC) form of investment.

“BCC is the FDI form via which foreign partners invest into Vietnamese enterprises by providing investment capital, transferring technical and management skills, and training human resources. The two parties agree to carry out business activities based on a business contract without the establishment of a new legal entity, and the benefits will be divided pursuant to the contract’s negotiated ratio. The Vietnamese
partner is exclusively responsible for managing and operating the business and they will own all assets when the BCC has expired. The BCC satisfies Vietnam’s requirements of raising long-term investment capital\textsuperscript{46}, obtaining new technologies, learning advanced management skills” ” (Tran Nhat Le and Obi Toshio, 2007), controlling fiscal out-flow of the foreign partners via a currency withdrawal scheme, and ensuring national security.

Historically, a BCC provided acceptable benefits to foreign partners who were involved in telecommunications services projects, “because telecom services rates were set relative high as a result of strict regulatory governance and monopoly provisioning in the telecommunications sector” ” (Tran Nhat Le and Obi Toshio, 2007). So far, foreign partners have invested into 4 mobile projects in Vietnam, those are BCCs between Singapore Telecom and VNPT to provide AMPS services in Ho Chi Minh City (ended in 2004), a 10-year contract between Comvik (Sweden) and VNPT to provide a nationwide GSM network (valued at 456 million $US and ended in May 2005), a 15-year contract between SLD (a joint venture between SK Telecom, LG Electronic and Dong Ah Telecom, Korea) and SPT to provide a CDMA network (valued at 230 million $US and scheduled to end in 2016), and a 15-year contract between Hutchison and Hanoi Telecom (valued at 655 million $US and scheduled to end in 2020).

However, for long-term investors, the BCC does not provide adequate attractions for to the following reasons:

- Foreign partners are not allowed to interfere with the network operation. They simply engage as consultants to the Vietnamese partners on relevant matters. Such scheme may lead to ineffective use of foreign invested capital;

\textsuperscript{46}There is no limitation on the duration of a BCC, however in telecommunications services provisioning, it needs time to recover the costs and get profit. Durations of BCCs in the Vietnam mobile market are varied between 6 years (BCC between VNPT and Singapore Telecom) and 15 years (BCCs between SPT-SLD and between Hanoi Telecom-Hutchison).
The BCC form does not allow for the establishment of a legal entity. Consequently, in order to implement the contract’s terms and conditions, the two involved parties have to create a Joint Consulting Board. This board is responsible for deciding investment issues and the benefit sharing method. The Vietnamese members of the board generally do not serve on the board full time and do not have detailed information to decide relevant matters in a timely manner, so it generally takes an inordinate amount of time and complicated procedures to carry out a BCC;

The BCC form requires foreign partners to bear all BCC expenses, but they can neither control the operational activities nor obtain access to basic information on business and development plans. Foreign partners are also not allowed to own any assets after the contract’s expiration.

Due to these constraints, several foreign investors did not express an interest in joining Vietnam’s mobile market, decided to stay aside, did not invest into the Vietnam mobile market and looked for more attractive investment opportunities. Moreover, the new mobile operators also were not satisfied with the BCC form, because it restricted their ability to co-operate with foreign investors to deploy networks pursuant to their awarded licenses.

47 In his talk with the MPT official, the head of the Telenor (a leading Norwegian mobile operator) Representative Office in Vietnam – Mr. Ola Ree said that Telenor put attention to the Vietnam mobile market from 2001. However until 2005, Vietnam did not accept the ownership of foreign investors in the telecommunications networks, while Telenor has no interest with the BCC form. Thus why the firm does not establish a representative office in Vietnam until 2005, when there are signals that indicate that Vietnam is going to privatize mobile network soon. See MPT newsletter Vol. 36, 2005 at http://www.vnpost.mpt.gov.vn/bao_2005/so36/bcvt/t12b1.htm

48 In January 2000, on the DGPT’s annual conference, SPT and Viettel made petitions to the DGPT to ask for allowing other advanced foreign direct investment forms rather than accepting BCC exclusively in building telecommunications network and provide services. See the DGPT Newsletter Vol. 3 (364), 2000, pp. 3
5.2.2 Privatizing with Equity

The investors have fewer advantages once they accept the game of privatization without equity since, in that case, the operators may not pursue efficient and effective business plans while the investors have no right to interfere into those behaviors and subsequently may have to pay for potential losses via their fiscal contributions. If the game is shifted from privatizing without equity to privatizing with equity, the investors can obtain a more beneficial position, where they can get both profits and control rights (value 2); meanwhile the state and the operators can absorb required fiscal sources but have to sacrifice their influential power. The benefit balance between the state/operators and the investors in this case is 2:2.

In order to be allowed to invest with equity, the foreign strategic investors, through their respective governments, eagerly pushed Vietnam to open its telecommunications market as a whole and the mobile segment in particular for broader foreign participation by using terms and conditions on the trade of goods as bargaining conditions. Particularly, foreign partners agree to open their markets of products for Vietnam and, in return, the Vietnamese government has to liberalize its services market. These bargaining games were implied during the trade agreement negotiations between Vietnam and their partners. In 2001, in its bilateral trade agreement with the US, Vietnam committed that after December 2005, US investors could establish a joint venture with Vietnam’s mobile operators to build mobile networks and provide services. The Agreement defined that “US investors can contribute up to 49% of a joint venture’s registered capital. Finally, this extension has also applied to all other foreign investors after January 2007, when Vietnam became a WTO member” (Tran Nhat Le and Obi Toshio, 2007). Prospectively, the State faces a difficult challenge to retain more than 51% of the mobile operators’ equity shares in the long run.

In that circumstance, the state’s strategic move will be chosen based on its objective toward the mobile market. There are two options the state can consider in selling its equity shares, as illustrated in the Diagram 5-2.
From 2005 to 2007, four of the six mobile networks planned to be listed on the national stock exchange market; those were MobiFone\(^49\), VinaPhone\(^50\), Viettel Mobile\(^51\) and E-Mobile\(^52\). By using this approach, the state can achieve several objectives at the same time. Firstly, the state will be the most powerful owner and can increase its control over the business activities, because in the most positive case, when the State sells 49.9% of the operator’s equity shares on the stock market and a single foreign investor is successful in buying the maximum number of shares that can be allotted to foreign investors (49% of the listed equity shares), that operator can only retain approximately

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\(^{49}\) The listing of MobiFone was stipulated in the Decision 528/2005/QD-TTg dated June 14, 2005 of the Prime Minister. Available at http://www.chinhphu.vn/portal/page?_pageid=33,638900&_dad=portal&_schema=PORTAL&docid=1461

\(^{50}\) Decided in the Decision 265/2006/QD-TTg dated November 17, 2006 of the Prime Minister on the Charter of VNPT. Available at http://www.mpt.gov.vn/details_law.asp?LawDoc_ID=231153052

\(^{51}\) Decided by the Official Document 1093/VPCP-DMDN dated March 2, 2006 of the Cabinet

24% of its equity shares; the other 25.9% of the operator’s shares are commercially distributed to domestic investors. By using this strategic move, the state can keep significant distance from other share holders, remain as the most decisive owner and balance the business benefits of the domestic investors. Secondly, the state can mobilize more investment capital from different sources, especially when investors have a positive evaluation on the potential fiscal capability of the mobile operators and are ready to submit high offers for their shares. In contrast, if the state chooses to establish a joint venture with a foreign partner, that partner can attribute up to 49% of the venture’s registered capital; meanwhile, the current registered capital of the mobile operators is not significant, especially in case of SPT (22.7 million $US) and Hanoi Telecom (500,000 $US), as shown in Table 5-1; accordingly, it is difficult for these operators to mobilize the necessary investment flow to expand their networks.

On the other hand, listing the mobile operators on the national stock exchange markets may cause controversial issues for the State. The State may not be able to attract long-term investment capital if the institutional and financial framework on securities and stock exchange market is not well established. Such listings are particularly risky for the State if the operators’ equity shares are held by speculators, but not real investors; in that case investment influx to the operators may become a virtual flow and can not positively assist the operators’ strategic plans, especially when a large group of investors exit the stock market and withdraw their capital. In order to eliminate financial risks that may occur, the State can choose a harmonization between absorbing direct investment and indirect investment by directly selling part of its equity shares to strategic investor(s) for a specified duration (getting long-term and experienced partners) and indirectly selling other amounts of its equity shares via the stock exchange markets.

53 This case will happen when the operator decides to list 49.9% of its equity shares (maximum ratio as legally permitted) on the stock markets, and a single foreign investor can purchase 49% of the listed equity shares (maximum room that foreign investors can buy as defined by the laws on securities)
5.3. Limitation of Privatization Approach

The restriction on foreign and domestic private participation in the mobile market causes two main difficulties in increasing the market’s efficiency and competitiveness.

5.3.1 Limitation of the Management Scheme

As required by the telecommunications law, all mobile operators must be state-owned companies, and the current management scheme that is applied to the State-owned companies still retains several characteristics of the centrally planned economic mechanism. The State-owned companies are considered a business arm of the state and are required to register their business plans and targeted business objectives with the government yearly. There is no incentive applied to the companies that have successfully reached higher achievements than their initial registered objectives. Further, the companies can request the responsible governmental agencies to adjust their registered plan during the fiscal year once they have faced difficulties in fulfilling their business objectives, and such adjustment is routinely approved without any punishment or financial responsibility imposed upon the companies.

Additionally, the boards of management, or the directors, of the State-owned companies have limited rights in deciding their companies’ development strategies. The decisive rights pertaining to state-owned companies are distributed among several governmental agencies, for example the Prime Minister is responsible for strategy issues, while the Ministry of Planning and Investment is in charge of investment decisions, and the Ministry of Finance is the key entity in deciding other financial matters. Such a bureaucratic hierarchy in managing State-owned operators is one of the primary causes of inefficient and ineffective activities of the State-owned companies. As reported by the incumbent VNPT, it normally takes from 18 to 24 months to obtain approval for an
investment project\textsuperscript{54} (MPT (b), 2005). This requirement is considered inordinately long in comparison to the speed of today’s ICT development. In the case of VNPT, the resulting delay in expanding its mobile networks while mobile demands were increasing caused a shortage of mobile capacity, more frequent network blockages and unacceptably poor service quality. Further, VNPT’s delay in expanding its fixed-line and backbone networks also created problems for competing mobile operators in developing their services since VNPT’s congested networks could not accommodate the competitors’ interconnection requirements.

In financial terms, the State-owned companies are not responsible for business losses and their losses can be deducted from the revenues of the subsequent years. On the other hand, since the national budget has been satisfying less than 50% of the investment capital requirements of the State-owned companies (see Table 5-1), this financial scheme has led to the situation that the companies purchased their services at sizeable high prices in order to get more profit to re-invest and increase their financial capacity. In such a case, the State has to sacrifice the benefits of the consumers and the companies’ efficiency to mobilize the necessary capital flow.

5.3.2 Influence on the Market’s Competition

Limitations on private and particularly on foreign participation in the mobile market have caused a delay in the realization of competition in Vietnam. Since all mobile operators must be State-owned, while the national budget can not supply sufficient capital to the operators, new mobile operators have faced substantial obstacles in providing mobile services. SPT received a mobile license in 1997 while the company had registered capital of 22.7 million $US. With such a modest amount of investment

\textsuperscript{54} For example, a pre-feasibility study to deploy a telecommunications project that values more than 25 million $US must be approved by the Prime Minister. Only after getting such approval, the telecommunications operators can prepare the feasibility study and submit to relevant Ministries for permission. However, there is no definition on how long the operators will get the Prime Minister’s approval (see the Government Decree 52/1999/ND-CP dated July 1999 and Decree 52/2000/ND-CP dated 12/2000 dated May 2000 on Management of Investment and Constructions of State-owned Enterprises)
capital, the company could not build a network and provide mobile services until 2003, when it was financially supported by a BCC valued 230 million $US with SLD Korea. Another typical illustration of the influence of a privatization approach on mobile competition is the case of Viettel. This military company was awarded a mobile license in 1998, but the license’s deployment was delayed for 6 years until 2004, when the company mobilized enough fiscal resources, by providing Voice over Internet Protocol (VoIP) services, and utilized that profit to create its own mobile network\(^{55}\) (Nguyen, M.H (a) & (b), 2007).

The restriction on private participation in providing mobile services has caused a lack of available investment capital in the market and, consequently, has led to a low level of mobile communications development in Vietnam. So far, foreign investors are only being permitted to invest around 1.3 billion US dollars in Vietnamese mobile markets in the 25-year-period 1995-2020. Compared with China and Russia, the two transitional countries that shared several comparable characteristics with Vietnam in the early 1990s, when the three of them were undertaking economic reforms from centrally planned economic mechanisms to more market-based oriented economic models; the limitation on private participation in mobile networks has significantly affected the capital absorption and the mobile penetration and subscriptions rates in Vietnam.

In China, the Chinese government also considered national security as one of the decisive factors in awarding a mobile license, and it applied strict control over mobile operators: all mobile operators must be state-owned enterprises (the state must own not less than 51% of the stocks or shares of the operator)\(^{56}\) and foreign investors could not

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\(^{55}\) As talked by the Vice General Director of Viettel Nguyen Manh Hung, in 2000 the company was provided less than 1.5 million SUS and it was impossible to deploy a mobile network with such capital. The establishment of Viettel mobile network was realized in 2003, when the company had reserved sufficient profit by providing VoIP services in the previous 2 years 2001 and 2002. See more at [http://www.vnpost.mpt.gov.vn/bao_2007/so01_02/chuyende/t14b1.htm](http://www.vnpost.mpt.gov.vn/bao_2007/so01_02/chuyende/t14b1.htm) and [http://www.vnpost.mpt.gov.vn/bao_2007/so141516/bcvt/t13b1.htm](http://www.vnpost.mpt.gov.vn/bao_2007/so141516/bcvt/t13b1.htm)

\(^{56}\) Article 12 of the Chinese Telecommunications Regulations, promulgated on September 25, 2000 specified that when examining an application for operating basic telecom business, the licensor should take into consideration the national security issue. The requirement of the state ownership is defined as one of
invest into the mobile operators in any form. To mobilize capital for network deployment, China Unicom – the second Chinese mobile operator tried to evade this rule by using a China-China-Foreign (C-C-F) investment model, under which a foreign company establishes a joint venture with a Chinese entity and this newly established joint venture, which is treated as a legal Chinese entity, directly cooperates with China Unicom. Under the C-C-F form, the joint ventures were allowed to cooperate with China Unicom to build and expand mobile networks and provide services. As recorded between 1995 and 1998, China Unicom had attracted $ 1.5 billion via more than 40 China-China-Foreign projects (Xu & Pitt, 2002, pp. 87). However, this investment form was forbidden in February 1999, when the Chinese Ministry of Information Industry proclaimed that the implementation of such an investment form violated Chinese laws and policies, and it demanded that involved parties cease and desist from engaging in such form of investment. As a result, the CCF contracts were terminated in July 1999 (Lu & Wong, 2003, pp. 117, 119). Since December 2001, upon China’s WTO accession, such limitation on foreign participation was abolished, and after December 2006, foreign investors can establish a joint venture with Chinese operators and contribute up to 49% of the venture capital (WTO, 2001).

In order to overcome the Chinese mobile operators’ financial shortfall, the Chinese government decided to list them on international stock markets. Consequently in 1997, China Telecom (which was separated to China Telecom and China Mobile in April 2000) launched 144 million initial public offering (IPO) shares on Hong Kong stock market and built GSM networks in several provinces, with 51% of the shares being held by the state and the remaining 49% floating on the Hong Kong stock market (Lu & Wong, 2003, pp. 116). In June 2002, China Unicom equity shares were traded on the Hong Kong and New York Exchange Markets and attracted $ 5.6 billion, “the largest ever Asian IPO outside Japan” (Lu & Wong, 2003, pp. 123; the World Bank online the license selection criteria set forth in Article 10 of the Regulations. See Lu & Wong, 2003, pp. 136-156 for the translation of the Regulations.
Following in January 2003, China Unicom established a wireless Internet joint venture with SK Telecom (Korea), with China Unicom owning 51% of the venture’s shares and SK Telecom holding the remaining 49%. Totally, China Unicom, alone, has attracted approximately 7.1 billion US$ via the CCF model and the IPO approach to expand its mobile network, 5.4 times more than the total capital that foreign investors have committed to investing in Vietnam’s mobile market.

Although they have similar viewpoints on the important role of telecommunications services to national security and a reluctance in allowing direct foreign investment, China is more advanced in attracting capital influx: the right to buy up to 49% of equity shares of a local Chinese mobile network has been extended to foreign investors since 1997, while such an extension is yet to be realized in Vietnam. The Chinese government further decided to list its mobile operators on Hong Kong and New York stock-exchange markets in order to eliminate institutional risks that could create potential investor disinterest and negatively impact upon the Chinese mobile operators, while Vietnam chose to list its operators on its new-established stock exchange markets, where institutional risks are widely predicted by various international observers.

On the other hand, through fully opening mobile market to private participation, Russian mobile operators could absorb huge amounts of investment capital from private sectors. Before the Soviet Union collapsed in 1991, Russian telecommunication industry was quite under-developed. Investments in advanced technologies were made mainly in order to strengthen defense capabilities. This resulted in investments in telecommunications being significantly lower than what was required for modernizing, expanding and updating the telecommunications networks. This situation changed in

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58 In February 2007, the International Monetary Fund (IMF) finished a report on Vietnam stock exchange markets, in which the IMF dedicated 3 main financial risks to the Vietnam’s commercial banks, to the national deficit balance and to the monetary and exchange rate policies. See the brief of this report at [http://www.vnexpress.net/Vietnam/Kinh-doanh/Chung-khoan/2007/03/3B9F3A18/page_2.asp](http://www.vnexpress.net/Vietnam/Kinh-doanh/Chung-khoan/2007/03/3B9F3A18/page_2.asp)
1991 when Russia started to transit to a market-based economy. In 1992, a decree was enacted that permitted any state or private enterprises to set up and operate a telecom network in Russia. The Communication Law that was adopted in 1995, and subsequently replaced by the Communication Law of 2003, set no restriction on foreign and private investment in the mobile market. Prior to 2006, Russia had licensed 3 national mobile operators (MTS, MegaFone and VympelKom); all of them were wholly private-owned. Besides, the private sector owns (25% - 1) equity shares of the Russia incumbent Svyazinvest (who is licensed to provide mobile services in 4 of the 7 federal regions) since July 1997 (Cheberko, unidentified date). Supported by an open policy on mobile privatization, enormous private capital flows are pouring into the Russian mobile market and the three national mobile operators are attracting $3-$4 billions yearly.

The Russian mobile privatization process is completely different from those in China and Vietnam. When China and Vietnam retained the dominant role of the State-owned operators and the incumbents and have been gradually privatizing, Russia has yet to set forth any limitations on private participation in the mobile market and the incumbent, Svyazinvest, has not been strongly involved into mobile services provisioning.

By using various approaches to absorb investment capital from private sectors, China and Russia mobilized significant financial sources to develop their mobile networks. As of 2005, mobile penetrations in Russia and China were around 9 times and 3 times higher than that of Vietnam, correspondingly.

Currently privatizing Vietnam’s mobile operators, by selling their equity shares, is allowed and the Prime Minister has set forth decisions to list 4 mobile operators on the national stock exchange market. This type of privatization will assist the mobile operators to absorb financial resources from the private sector, to expand their networks and to improve services, but it is still too early to confirm the effectiveness of this approach. Compared to the selling-equity-share-approach by allowing the private sector to establish a joint venture, it is more difficult for the listing approach to keep the capital flow sustainable and balanced since the buyers is not bound to investment commitments.
and they can withdraw their money from the markets anytime they desire. As a result, the capital influx then can be easily shifted to an out-going flow and cause financial problems for the mobile operators in pursuing their strategic development plan. Further, the mobile operators, so far, are allowed to list on the national stock exchange markets only, while these markets are newly established, small in scale, not advanced operationally, and the stock exchange as an institution is still in the formative building stage\textsuperscript{59} – attributes that do not promote rapid mobile network development and/or expansion.

5.4 Chapter Conclusion

Mobile services provisioning is being implemented in Vietnam with limited privatization. The country desires to foster development of the mobile market to assist other economic sectors’ growth, however, it considers mobile telecommunications a sensitive field that can strongly affect national security; consequently, the State still maintains decisive control over the mobile operators by using ownership control mechanisms. As a result, foreign investment with equity shares was prohibited for more than a decade. This restriction was recently loosened, and pursuant to Vietnam’s WTO commitments, foreign investors can establish a joint venture with mobile operators and contribute up to 49% of the venture’s registered capital. This opportunity can not be extended to all foreign investors since 2 of the 6 licensed mobile networks are invested by SLD Korea and Hutchison, and these investors have been reserved a priority to negotiate joint ventures with their partners. Meanwhile, the government has already declared its plan to sell its equity shares in the 4 remaining mobile networks (MobiFone, VinaPhone, Viettel Mobile and E-Mobile) on the National Stock Exchange Markets. Accordingly, it is more difficult for foreign investors to have an opportunity to establish a

\textsuperscript{59} The Ho Chi Minh City stock exchange market was established in 1999, started operation in July 2000 and as of February 19, 2007, has organized less than 1,500 trading sessions. Hanoi Stock Exchange market was established in 2004 and started operating in March 2005. Due to technical constraints, these markets carry out only 3 offer matchings per day but not continuous matching as occurs on the more well-known exchange markets, such as Tokyo or New York. As of February 20 2007, 195 companies have been listed on these two markets.
joint venture with these 4 mobile operators. The government, thus, is able to keep control over the mobile operators, as a major shareholder, and management interference from foreign investors is not being allowed. However, to balance between the long-term and short-term investment influx, the state should choose a suitable selling-equity-share approach by harmonizing between directly selling part of its equity shares to strategic long-term and experienced investor(s) for a specific period of time and generally selling the other shares on the national stock exchange markets.

Limitation on private participation so far has not positively affected mobile development in Vietnam. Compared with China and Russia, which are also in economic transitional phases and have shared several comparable economic conditions with Vietnam in the early 90’s but used different methods to accelerate foreign investment flows, the development of Vietnam’s mobile market is far less developed than that of China and Russia. As of 2005, mobile penetration in Vietnam was 9 times and 3 times lower than those of Russia and China, respectively.

Maintaining State-owned status of the mobile operators also causes procedural difficulties and problems for the operators in expanding their networks. The current State-owned management scheme does not offer significant incentives for the mobile operators to enhance their efficiency and effectiveness. Furthermore, the leaders of the State-owned companies are not authorized to decide all firm-related issues. The decisive rights pertaining to State-owned companies are distributed among several governmental agencies, such as the Prime Minister, the Ministry of Planning and Investment, the Ministry of Finance, the Ministry of Posts and Telematics and the Ministry of Internal Affairs. Such a bureaucratic hierarchy in managing State-owned operators is one of the main reasons for the inefficient and ineffective activities of the mobile operators. As reported by VNPT, it normally takes from 18 to 24 months to obtain approval for an investment project. This management scheme is considered inordinately long in comparison to the speed of today’s ICT development and does not positively support the operators. Since the State desires to maintain its current ownership of the mobile
operators, it should restructure and simplify its administrative procedures to effectively accelerate the development of this sound market.
Chapter 6. POLICY IMPLICATIONS AND PROPOSALS

Competition, institutional reform and privatization are recognized as positive factors to facilitate telecommunications development worldwide, though each country has its own approach to introduce these policy innovations, based on their political and economic conditions. The implementation of the above policy innovations in Vietnam, so far, has shown both positive influences and deficiencies in the way of accepting and realizing those innovations. This chapter, therefore, presents several learning experiences from the case of Vietnam and proposes recommendations to the state in order to strengthen the mobile market competition and increase the efficiency of this market segment.

6.1 Learning Experiences

The development of the mobile market in Vietnam is both positively and negatively affected by the implementation of public policy. Learning experiences from the country's political interferences in the mobile market may be valuable for other developing countries that are in the process of liberalizing mobile markets and selecting appropriate movements to facilitate mobile development.

Firstly, since the telecommunications regulator and the incumbent were interdependent to each other during the monopoly period, the telecommunications regulator may retain a financial and personal interaction with the incumbent, while on the other hand, the telecommunications regulator acts as the decisive governmental body in initiating, nurturing and ensuring competition. Once such interaction is maintained, new mobile operators will not receive sufficient and timely regulatory support to survive and grow. Therefore, when the state initiates a mobile competition policy, it will be necessary to eliminate the close interactive relation between the telecommunications
regulator and the incumbent. Once such elimination can not be effected in a timely manner, there will be a requirement for direct interferences from the Cabinet or other responsible agencies in order to ensure the survival of the new entrants. Mobile competition was theoretical introduced in Vietnam in 1995. At that time, the telecommunications regulator, the DGPT, maintained a close relationship with the incumbent VNPT, who had already deployed its mobile network. Institutional reform that must be carried out by the regulator was not performed on time, and this led to a delay in licensing activities and in enacting basic regulations for a competitive mobile market, such as regulations on interconnection and scarce resources allocations. Further, the competition agency was not created until 2006 and, likewise, active support from the Cabinet was not recorded, consequently, the new entrants had no alternative but to wait for the regulator’ necessary reforms. This scenario is largely different from the case of China, where the Chinese Cabinet strongly interfered into the mobile market and granted various privileges to the other mobile operator China Unicom after observing that the Chinese MPT tended to favor the incumbent, China Telecom.

Secondly, once a country is short of financial and technological resources, the mobile market should be opened for private participation, so that new mobile operators can mobilize essential investment capital to deploy their networks pursuant to their awarded licenses. The state may retain its control over mobile operators via an ownership scheme, but such maintenance should be balanced in order to provide adequate attractive conditions for both mobile operators and private investors, and the issue of scarce resources should be carefully governed in order to eliminate financial risks to both the state and the mobile operators. This experience is concluded by observing the privatization process in both Russia and Vietnam. In Russia, the Federal government fully liberalized its mobile markets once the provisioning of services were commenced. To date, the spectrum allocation plan and the spectrum usage fees have not enacted by the relevant authorities. Such unclear rules, on the one hand, cause institutional risks for operators since the mobile spectrum is assigned unfairly and the operators have to lobby to get necessary bandwidth. On the other hand, the lack of regulation on frequency usage fees has led to a fiscal loss to the government, while the
government sells its assets (under the form of scarce resources) to private sector (mainly foreign investors) without an adequate fiscal evaluation.

Thirdly, the licensing activities are the first barrier to market entry and are formally carried out by the telecommunications regulator. In order to reduce fiscal burdens to new mobile operators once they enter the market, a comparative licensing approach, i.e. licensing by using a beauty contest like the case of Vietnam, is recommended. By applying this method, “mobile operators could reduce expenses when obtaining a license and could deploy their networks earlier. As a result, customers may enjoy services sooner and at cheaper prices ” (Tran Nhat Le and Obi Toshio, 2007). However, to precisely choose successful applicants via beauty contest method, the licensing criteria must be clear, predictable and transparent. Vietnam currently applies a combination of “three binding criteria and a single alternative criterion to decide upon successful applications for a mobile license. This combination is theoretically ideal, if all criteria have been designed carefully and transparently, because the regulator can easily select a successful applicant by using the alternative criterion. It is also more predictable for applicants and they can actively compile their proposed plans. Further, the exclusive alternative criterion was designed by using quantitative measures to encourage universal services provisioning, so that it is more feasible for the regulator to both select the best candidate and accelerate the fulfillment of one of the most important regulatory targets” (Tran Nhat Le and Obi Toshio, 2007).

Last but not least, interconnection issues should be properly regulated. When the incumbent dominates both the fixed and mobile markets, like the case of Vietnam, it is recommended that management of the backbone transit network be separated from the incumbent’s other operations and that an intermediate firm be authorized to control the network, like the interconnection approach of the Russian Federation, or at least an independent accounting system is required to apply to all telecommunications operators, especially when they are licensed to do business in different telecommunications services segments.
6.2. Research Proposals

There are numerous deficiencies observed in the Vietnam’s mobile market management, as analyzed above. This dissertation proposes that the following matters should be considered and adopted by the State in order to strengthen the telecommunications institutions and facilitate the mobile development.

First, privatization should be implemented in a more open manner. Instead of asking the mobile operators to list on the national stock exchange markets, the possibility to list on the international markets should be studied and implemented as soon as possible in order to attract long-term investors by isolating them from the institutional risks that may be cause by the newly established security institution in Vietnam. Further, in order to balance between the state’s will of control over the mobile market and its desire to facilitate the mobile development, and to reduce static and dynamic losses that may be caused by the less developed mobile communications market, the privatization approach that would privatize major equity shares of the state in some mobile operators, particularly non-dominant operators, should be considered. This method is more effective than the current ownership scheme, where the state remains as the largest and major stakeholder of all mobile operators.

Second, it is recommended that an independent regulator be established to manage the competitive telecommunications industry. Establishing a multi-sector regulator to regulate, for instance, all network industries, in the surveyed country is impossible in the short-run since competitive situations in different industries are largely different. On the other hand, creating a new organization under the direct control of the Cabinet will increase the independence of such an agency because it reduces layers of government that the regulator would have to reported to and be governed by; but on the other hand, such a creation requires a significant amount of time and complicated
procedures. In the short term, the most realizable way would be to form and strengthen a quasi-independent regulator inside the line Ministry. These entities are quasi-independent although they do not satisfy all independent indicators, for instance, they are neither funded by the national budget nor do they have any relationship with the operators, but they are partially independent from the state agencies because they are under the Ministry’s jurisdiction: they are created by and their leaders are appointed based on the Minister’s submission. A quasi-independent regulator inside the Ministry should be formed and authorized to address other regulatory responsibilities, such as licensing, numbering, interconnections, anti-trust and users’ rights protections. Further, spectrum management issue is the most typical characteristic of mobile regulation and, so far, it is the only difference between governing fixed and mobile telecommunications, consequently the quasi-independent regulator should be in charge of managing telecommunications as a whole, not just the mobile communications market.

To make this regulatory body as independent as possible, funding for it should not be extracted wholly from national budgets, and it should be covered by various fees – (such as license fees or scarce resources usage fees) or by other types of contributions from industry operators. Previous experience with managing frequency in Vietnam proved that the regulatory framework and decision making process would be more effective if the agency in charge is funded by collected fees; the agency has strived to draft and submit all necessary legal documents for regulating its sector since its revenue depended on collected fees. In order for it to collect such fees, the agency would have to be provided a clear legal framework and mandate to exercise its duties. Additionally, such stipulations cannot favor of any mobile operator over any other operators. The relevant collected fees could be significant. In Vietnam, annual collected mobile numbers usage fee may surpass 4 million $US. Such significant financial resources

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60 In Vietnam, creating a new governmental agency requires the Prime Minister’s agreement and approval of the National Assembly (Law on the Structure and Responsibilities of the Government)
61 Spectrum issue is regulated by 8 legal documents in Vietnam. The spectrum allocation plan and the table of frequency usage fees are available and predictable, all mobile operators are treated equally in allocating spectrum and paying usage fees
62 Authors’ calculation based on the mobile usability assigned to mobile operators and rates applied to numbers’ usage in Vietnam. Yearly fee/usable number is 1,000 Vietnamese dong. 8 network access codes are assigned to 6 mobile operators, each network access code has 8,000,000 usable numbers (length of
could be used to cover the cost of regulatory activities and help the regulators to recruit and keep qualified staffs by paying adequate salaries.

Third, an independent regulator cannot function in a transparent manner if it is not being provided with the necessary legal basis, or the basis is not well-designed, even though the regulator does not institutionally or financially depend upon any external sources. As analyzed in the previous sections, there are several legal documents that need to be enacted or revised by the responsible authorities in Vietnam, at least the following revisions are needed:

- Clearly define selection licensing criteria and exclusively authorize the regulator to affect all licensing duties. This dissertation “proposes that the constitutional branch (the National Assembly) and the executive branch (the Cabinet and other relevant ministries) should amend, revise and renew the current telecommunications licensing legislation. Particularly, such legislative activities should consist of abolishing the joint-scheme among related agencies in evaluating applications for the purpose of selecting successful applicant(s) and the requirement of obtaining the Prime Minister’s approval upon such selection; authorizing the regulator to independently exercise its licensing responsibilities by using the applicable legal framework; amending the time needed for giving a decision on submitted applications; and revising the selection criteria used in selecting successful applicants. On its own volition, the regulator should publicly disclose all terms and conditions set forth in awarded licenses” (Tran Nhat Le and Obi Toshio, 2007).

The line ministry, in its 2006 annual report, plans to draft a new bill of telecommunications law to replace the current applicable ordinance on posts and telecommunications. Such bill’s preparation can not be completed in a short period.

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mobile subscription number is 10 digits, of which 3 digits are network access code. Numbers begin by 0 or 1 are not applicable, since 0 is used for identifying domestic long distance calls and 1 is used to identify special services). The annual collected number fee would be 1,000 x 8,000,000 x 8 = 64,000,000,000 Vietnamese dong, equivalent to around 4 million SUS (1 SUS≈ 16,000 Vietnamese dong as informed by the State Bank of Vietnam on October 23, 2006 http://www.sbv.gov.vn/home/index.asp)
of time\textsuperscript{63}, while the MPT also arranges to license 3G and WIMAX in 2007. This licensing innovation will be implemented once the new licensing policy is adopted and approved. In order to reduce the interdependence between the MPT and other Cabinet’s authorities in licensing initiatives, there is a need to get the Prime Minister’s approval on the overall licensing policy but not for each particular licensing case. The new 3G and WIMAX licensing policy should also abolish the conjunctive coordination among the Cabinet’s agencies in screening applications for a 3G and WIMAX license. Instead, the consultation with other state agencies can be obtained via public hearing procedures when the MPT prepares the licensing policy guidance.

“Revision, amendment and renewal of the current regulatory framework would not only satisfy the WTO requirements, but it also would be beneficial to Vietnam in attracting more investment flow into the mobile market and it would further effectively assist the regulator with the challenging licensing duty in the future when the mobile market is more liberalized, as well as with corrections to the improper licensing practices that were initiated during previous periods” (Tran Nhat Le and Obi Toshio, 2007).

- Abolishing the authorization of the State ownership right in VNPT to the MPT and transferring such authorization to another state agency, for instance the Ministry of Finance, in order to decrease the inter-dependence between the MPT and the incumbent.

Fourth, it is necessary to simplify the administrative regulations on investment issues and speed up the process of reviewing an investment project. The current administrative procedures on approving an investment project are quite antiquated,

\textsuperscript{63} As observed and experienced by the author, the duration for drafting a bill and waiting for the bill to be voted for a law normally takes years under the Vietnamese legislative procedures. Initially, such innovation should be put into the agenda of the National Assembly, while the National Assembly gathers twice a year. When the plan to draft a bill is accepted by the National Assembly, the administrative agencies (the line ministries in almost cases) have to draft, carry out public hearing, submit the bill for the Cabinet and then the Cabinet decides to submit to the National Assembly for voting.
complicated and require too much review time. As pointed out in the previous chapters, it takes from 18 to 24 months to get approval for an investment plan submitted by the operators. It also consumes comparable periods of time to obtain approvals for foreign investment projects, like the case of SPT and Hanoi Telecom.


Chapter 7. CONCLUSION

7.1 Introduction

This dissertation contains six chapters. Chapter 1 presented the background theory of public policies in general and particularly the public policies that have strongly affected telecommunications services provisioning. Chapter 2 reviewed literature studies on impact of competition, privatization and institutional reform on telecommunications markets worldwide, on specific continents or within different groups of countries, such as Asia-Pacific, Latin American, OECD or transitional countries. Chapter 3 analyzed the impact of competition on the mobile market development in Vietnam. Chapter 4 focused on institutional reforms in Vietnam’s telecommunications sector and, consequently, Chapter 5 presented the impact of privatization policy on the mobile communications market and its limitations in a comparable context are examined. Chapter 6 pointed out policy implications and proposals via observing the implementation of public policy in Vietnam. This chapter summarizes the findings set forth in this research and proposes additional research that should be undertaken in the future.

7.2 Research Discussion

Recognition of the role of competition, privatization and institutional reform in accelerating telecommunications market development is not a newly found topic. Many studies have proved that competition and privatization positively contributed to telecommunications development: they increased telecommunications productivity and telecommunications growth in terms of penetration and subscriptions, as well as reduced services prices (Bar & Borrus, 1997; Wallsten, 2001, 2004; Boylaud & Nicoletti, 2001; Li & Xu, 2004). Likewise, these studies have proved that countries that restrict telecommunications competition may suffer both static loss (the loss of sale opportunities by the telecommunications services providers and the accompanying upstream and
downstream effects on other suppliers that sell complementary products and services) and
dynamic loss (the long-term, cumulative handicaps that a domestic economy experiences
due to the lack of telecommunications competition) (Bar & Borrus, 1997).

Further, several researches proved that competition, privatization and institutional
reform are supportive factors to each other and must be carried out in sequence. The
suggest that institutional reform should be carried out first, followed by privatization in
order to increase the value of the privatized firms and reduce institutional risks.

In Vietnam, competition plays an essential and positive role in facilitating
Vietnam’s mobile development. Without competition, mobile tariffs could not be
reduced as rapidly as they have been in recent years. Comparing the charges applied
before the real competition commencement in 2003, the mobile connection charge that is
applied in February 2007 by the VNPT\(^64\) has been reduced by 75%, from around 35 $US
in 2003 to 8 $US in February 2007, while the monthly charge has decreased to 57% from
7 $US in 2003 to 4 $US in February 2007; and the cost for a 3-minute local call (peak)
has been reduced by 18.6% (ITU, 2005; VNPT, 2007). Further, during the monopoly
period 1992-2003, the incumbent reduced its tariff 3 times as required by the regulator in
2000, 2002 and March 2003, while during the competition period between July 2003 and
February 2007, the incumbent actively submitted for mobile tariff reduction several times
and consequently, was allowed to reduce its mobile tariff 3 times in July 2004, September
2005 and May 2006\(^65\). Competition is also correlated with the development of mobile
subscriptions: mobile density has nearly doubled in the consecutive 2 years 2005 and
2006, and the number of new mobile subscriptions in 2006 was roughly equaled to total
number of mobile lines which the market was able to achieve in the 13 years 1992 – 2005
(MPT, 2007).

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\(^64\) Since in 2003, the VNPT was the single mobile operator, this dissertation used mobile connection charge
that is applied by the VNPT in February 2007 in order to get a more precise comparison.

\(^65\) Those reductions were approved by the MPT’s decisions on the VNPT mobile tariff (since the VNPT
was the monopoly and then the dominator in the mobile market, its tariff reductions must be approved by
the MPT’s decisions, which are accessible at
Moreover, competition is actively assisting the Vietnam’s mobile market in narrowing the digital gap\(^{66}\) between Vietnam and other countries, such as China. After competition realization, mobile density in Vietnam increased from one-sixth of that of China to approximately one-forth in 2004, and further increased to around one-third of China’s density in 2005 as shown in Figure 6-1.

Competition was theoretically introduced in Vietnam in 1995, but institutional reform was not properly instituted in order to realize the benefits of competition. There were no rules and regulations to initiate and facilitate competition until late 1997, and licensing procedures and interconnection regulations were not promulgated until 1998. Accordingly, two companies - SPT and Viettel - received permissions from the Prime Minister to provide mobile services in 1995, but they were not awarded a license until 1998, and competition was not realized until mid-2003.

The current legal framework basically covers all necessary aspects of competitive mobile market regulation, including interconnection matters, spectrum management, licensing and tariffs. However, several deficiencies exist in that framework. First, the licensing procedures are not transparent (i.e. visible and accessible to information) and predictable: there is no stipulation on the duration to review qualified applications for a license, and the qualified applicants do not know exactly how long they will have to wait for a regulatory decision on the issue. Further, the license selection criteria are not clear, and that it is difficult to determine whether or not the regulator’s judgment regarding successful applications is fair. Second, the interconnection charge is not calculated based on a cost-based orientation. This charge is submitted by the incumbent and approved by the regulator while the incumbent maintains cross-subsidies among its services and the regulator does not set forth a transparent formula to calculate the real costs of interconnection. Third, a country-wide numbering plan was not become into effective

\(^{66}\)“Digital gap” is interpreted as the disparity in terms of ICT enjoyment between countries/groups of countries. In its annual report 2006, ITU measured the gap by using fixed telephone lines, mobile lines and Internet users (World Telecommunications/ICT Development Report 2006, Executive Summary, pp.4. Accessible at http://www.itu.int/ITU-D/ict/publications/wtdr_06/index.html)
until January 2007, thus the management of numbers allocation was non-transparent and unpredictable and resulted in unnecessarily prolonged arguments between the regulator and operators on the issue in January and February 2006.

Further, in a competitive environment, the telecommunications regulator serves an important role in initiating, nurturing and facilitating competition via licensing, interpreting and implementing related laws. The regulator is also the primary resolution agency in matters involving fair competition and anti-competitive behavior complaints since the mobile operators apparently prefer to submit their disputes to the regulator rather than to the competition agency. However, the regulator does not independently carry out its duties: the regulator has to consult with other agencies in reviewing applications for a license, and the issuance of a license must be approved by the Prime Minister. The regulator also maintains a close relation to the incumbent, because it is authorized to perform several state-ownership rights and obligations over the incumbent. Particularly, the regulator is authorized rights to propose candidates for all positions of the VNPT’s board of management, to decide a wide range of the VNPT’s business plan, to designate its own representative on the incumbent’s board of management and to involve into the incumbent’s activities via its controlling rights. Due to such interactive relationships, it is difficult to conclude that the regulator has been impartial to all operators in governing the mobile market. In fact, non-neutral regulatory behaviors were observed between 2003 and 2005 when the regulator was dealing with specific tariff and interconnection issues.

On the other hand, the government is reluctant to accept privatization on a broad scale, while at the same time it is experiencing insufficient financial capital, human resources and technology to develop the mobile market. All Vietnamese mobile operators must be state-owned entities, the state must hold at least 51% of the operators’ equity shares, and foreign investors can invest up to 49% of the registered capital of the mobile operators. This commitment, as commented by the National Assembly, may not
encourage foreign investors’ participation into the telecommunications market\textsuperscript{67}. This ownership scheme creates difficulties for the operators in fulfilling their business purposes since the operators’ boards of management are not authorized to decide all business issues. Each owner’s rights and obligations is, in fact, jointly implemented by different agencies, include the Prime Minister, the Ministry of Investment and Plans, the Ministry of Finance, the Ministry of Internal Affairs and the MPT. This cumbersome hierarchy requires complex procedures\textsuperscript{68} to decide upon a single business plan, for example it takes from 18 to 24 months to get a final approval to carry out a network project (MPT(b), 2005). Such unnecessary procedures are inordinately long in comparison to the speed of today’s ICT development and do not positively support the operators.

Moreover, privatization was carried out in the form of “contracting out” and foreign partners were not allowed to be the owners of mobile operators’ equity shares for 14 years from 1992 to 2005. The reluctance in accepting privatization, together with the delay in performing institutional reform resulted in significant challenges to new operators – particularly SPT and Viettel - when they initially entered the market. Due to the lack of investment capital, SPT could only deploy its mobile license after signing a contract with SLD - a firm that invested by 3 Korean firms: SK Telecom, LG Electronic and Dong Ah - in 2002 in order to obtain the necessary capital to provide mobile services. In Viettel’s case, the company could not build a network to provide services until September 2004, 6 years after receiving its mobile license.

Currently, privatizing mobile operators by selling their equity shares either to particular partners (establishing joint ventures) or to the public (listing the operators on


\textsuperscript{68} For example, a pre-feasibility study to deploy a telecommunications project that values more than 25 million $US must be approved by the Prime Minister. Only after getting such approval, the telecommunications operators can prepare the feasibility study and submit to relevant Ministries for permission. However, there is no definition on how long the operators will get the Prime Minister’s approval (see the Government Decree 52/1999/ND-CP dated July 1999 and Decree 52/2000/ND-CP dated 12/2000 dated May 2000 on Management of Investment and Constructions of State-owned Enterprises)
the national stock exchange market) is allowed. However, more time is required to confirm the effectiveness of selling equity shares via the national stock exchange markets, because Vietnam’s stock exchange markets are newly established, small in scale, not advanced operationally, and the stock exchange as an institution is still in the formative building stage. These deficiencies may bring about obstacles to the operators in attracting medium and long-term investors, and the withdrawal from the markets of a large group of investors would cause severe fiscal problems to the operators.

The delay in implementing institutional reform and reluctance in undertaking privatization has negatively affected the implementation of a competition policy and caused the slow speed of Vietnam’s mobile development. In 1994, Vietnam had a comparable mobile density to that of Russia, but a free approach in employing privatization allowed Russia to quickly increase its mobile density. In 1996, when mobile service was monopoly-provided in both, Russia’s mobile density was 1.7 times higher than that of Vietnam. The gap was widened when Russia accepted duopoly provisioning in 1997; in 2000, the Russian mobile density was 2.2 times higher than that of Vietnam. This gap was widened even more after Russia accepted full competition in the mobile segment, and in 2005, Russia’s mobile density was 8-fold greater than that of Vietnam (Figure 6-1).

In another comparative scenario, China commenced its mobile duopoly in 1995, the year that Vietnam opened its mobile market to competition. Real competition was not realized in Vietnam until 2003; by that time, China had achieved a 20.9% mobile penetration rate, while Vietnam’s achieved rate was only 3.4%.
One of the reasons for the delay in implementing institutional reforms in Vietnam was the close interactive relationship between the regulator and the incumbent VNPT; during the delay period, the regulator tended to protect the monopoly position of the incumbent. On the other hand, the reluctance in carrying out privatization is the result of the government’s will to retain strict control over mobile operators, and this situation may not be likely to change significantly even as the country continues its globalization process. Consequently, competition was introduced, but mobile services were actually provided on a natural monopoly basis for a decade. Now, that natural monopoly has been transferred to the form of a state monopoly, where all mobile operators must be state-owned entities. Moreover, institutional reforms have been attempted several times (in 1992, 1996-1997 and 2002), but such reforms are not adequate to create independence for the regulator, or a transparent telecommunications legal framework.
Comparatively, even the telecommunications regulators in China and Russia are still not independent, but timely and strong regulatory supports from the Cabinets and the regulators have essentially nurtured and facilitate their mobile developments. The second Chinese operator – China Unicom – has received continuous assistances initially from the Prime and Vice Prime Ministers, and then the telecommunications regulator in terms of investment and assets, tariff, interconnection and frequency. On the other hand, Russia is in lack of a transparent frequency management scheme, but the regulator, via flexible management on tariff and interconnection, has positively supported the growth of its mobile market.

The implementation of public policy in Vietnam’s telecommunications sector confirms this dissertation’s hypotheses, those are:

1. Competition plays both essential and positive roles in accelerating mobile development;
2. The role of institutional reform has not been adequately considered; hence an independent regulator and transparent and workable legal framework does not exist, which impedes the effectiveness of any liberalization policy; and
3. Reluctance in introducing a privatization policy has negatively resulted in mobile development outcomes and does not fully support liberalization.

In order to overcome the observed policy deficiencies, there is a need to modify and introduce other policy directions to effectively assist the implementation of telecommunications competition and privatization in Vietnam; those are 1/ privatizing mobile operators in a more liberal manner by selling major state equity shares in non-dominant mobile operators, listing the mobile operators on international stock market; 2/
establishing an independent regulator inside the line ministry in short term; 3/ revising current telecommunications framework, and simplifying and speeding up administrative procedures on investment.

7.3 Limitations and Suggestions for Future Research

The impact of public policy on the development of the mobile market has been the focus of this research; however, in Vietnam, telecommunications indicators in general and mobile indicators in particular, have not been systematically collected and published. Due to the lack of sufficient and detail data on mobile traffic, mobile revenue and number of employees of mobile operators, the research could not evaluate the impact of competition on mobile development in a broader range of performance indicators, such as mobile productivity and contribution of the mobile revenue to the national GDP. Therefore, the author readily admits that the analysis in this dissertation could be affected by such lack of information. Further, competition was realized in Vietnam from mid 2003, and not all mobile operators provide services until January 2007; and so far privatization approach by selling the state equity shares in the mobile operators is not attained yet. Accordingly, impact of competition and privatization policies on mobile development may not be fully reflected in this research and it needs more time to evaluate these policies’ success and failures.

The other limitation of this dissertation is related to detailed evaluation of the impact of public policy on mobile development and the subsequent impact on Vietnam’s overall economic development. There is recognition that mobile development is correlated with national economic development, but how the implementation of public policy in Vietnam’s mobile telecommunications directly affects economic development has not been analyzed. Such an analysis would be useful in confirming the necessity of fostering privatization and institutional reform in the mobile market in order to realize Vietnam’s national economic goals.
To achieve a more sound understanding of the impact of public policy on mobile telecommunications development in Vietnam, two topics are recommended for further research:

- A full scale collection of mobile market development indicators and statistics for Vietnam, before and after introducing real mobile competition and a more liberal privatization approach (i.e. selling equity shares of the operators), should be undertaken to analyze the influence of public policy on the future development of the mobile market;

- A correlation between the mobile development and the overall economic growth is needed to evaluate the most effective way to undertake mobile privatization, competition and institutional reform.
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