USAID
FROM THE AMERICAN PEOPLE

VNCI Policy Paper # 3

VNCI
Vietnam Competitiveness Initiative

COMPETITION REVIEW OF

THE VIETNAMESE TELECOM SECTOR

June 2005

This publication was produced for review by the United States Agency for International Development (USAID). It was prepared by Nguyen Thanh Ha and Pham Quang Thanh of Vietbid Technology & Investment Consulting Center and Jacob Gullish of the VNCI with substantive technical input from John Davis of the USAID-funded STAR Vietnam Project.

VNCI
Vietnam Competitiveness Initiative

The Vietnam Competitiveness Initiative (VNCI) is an economic growth project of the United States Agency for International Development (USAID) to improve the competitiveness of small and medium-sized enterprises (SMEs) in Vietnam. The project has three components: (1) Improving the regulatory climate for SMEs; (2) SME capacity building; and (3) SME access to finance. VNCI is managed by Development Alternatives, Inc. (DAI). The Asia Foundation is the principal subcontractor to DAI and is responsible for implementing component one of the project.

Unit 02, 15th floor, Prime Centre Building
53 Quang Trung Street, Hanoi, Vietnam
Tel : (84-4) 943-8163
Fax: (84-4) 943-8160
www.vnci.org

Visit **www.vnci.org** to download this and other VNCI policy papers and to view media reports on VNCI policy activities.

COMPETITION REVIEW OF

THE VIETNAMESE TELECOM SECTOR

Disclaimer

The authors' views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

ACKNOWLEDGEMENTS

This report was prepared by Nguyen Thanh Ha and Pham Quang Thanh of Vietbid and Jacob Gullish of the VNCI, with substantive technical input from John Davis of the USAID-funded STAR project.

Following the completion of the first draft of the report, the results were disseminated at a public workshop hosted by the Central Institute for Economic Management on 10 November 2004. Feedback from this workshop was then incorporated into the final report.

VNCI would like to thank Huynh Thanh Tung of Saigon Postel, Nguyen Manh Bang of VP Telecom and the other managers of the surveyed firms for their responsiveness to our questions and inquiries. Other acknowledgements include Steve Parker (STAR project) and Fred Burke (Baker and McKenzie) for their input and advice, and Ngo Thi Minh of Vietbid for data processing. This report also benefited from the guidance and support provided by Dennis Zvinakis, Vietnam Country Manager of USAID.

All the remaining errors and omissions, and of course interpretations and opinions expressed in this report, are the sole responsibility of VNCI.

*
* *

The Vietnam Competitiveness Initiative (VNCI) is an economic growth project funded by the United States Agency for International Development (USAID). VNCI is managed by Development Alternatives Inc (DAI).

The Asia Foundation is the principal subcontractor to DAI and is responsible for implementing the research and policy component of the VNCI project. The objective of this component is to improve the regulatory environment for business, with a particular focus on regulations governing small and medium sized private businesses. This is the third in a series of policy studies produced by The Asia Foundation under VNCI.

The Asia Foundation

development alternatives, inc.

CONTENTS

LIST OF FIGURES

ABBREVIATIONS

ADB	Asian Development Bank
BCC	Business Cooperation Contract
BPO	Business Process Outsourcing
BTA	Bilateral Trade Agreement between the United States and Vietnam
CAGR	Cumulative average growth rate
CDMA	Code Division Multiplexing Modulation
CSO	Community service obligations
DGPT	Directorate General of Post and Telecommunications
DLD	Domestic long distance
DSL	Digital subscriber lines
FBO	Network or facility based operations
FCC	US Federal Communications Commission
FPT	Fiber to the premise
GATS	General Agreement on Trade in Services
GIPI	Global Internet Policy Initiative
GSM	Global System for Mobile Communications
HT	Hanoi Telecom
ICT	Information and communication technology (ICT)
ILD	International long distance
IP	Internet Protocol
IT	Information technology
ITES	IT-enabled services
ITU	International Telecommunications Union
IRR	Internal rate of return
ISP	Internet service provider
IXP	Internet exchange providers
LAN	Local area networks
MFO	Most favored nation
MP 3	Moving Picture Experts Group Layer-3
MPT	Ministry of Post and Telecommunications
NGN	Next generation networks
NII	National information infrastructure
NIPTS	National Institute of Post and Telecommunications Strategy
PHS	Personal Handy-phone System
PTT	Postal, Telephone and Telegraph
RFID	Radio frequency identification
SBO	Service-based operations
SMS	Short messaging service
SOE	State-owned enterprises
SPT	Saigon Postal and Telecommunications
TCP/IP	Transmission control protocol/Internet protocol
TSLRIC	Total service, long-run incremental cost

VAS	Value-added services
Viettel	Vietnam Military Telecom Company
VISHIPEL	Vietnam Shipping Telecommunication Company
VNCI	Vietnam Competitiveness Initiative
VNPT	Vietnam Post and Telecommunications
VOD	Video-on-demand
VoIP	Voice over IP
VPN	Virtual private networks
WAN	Wide area networks
WiFi	Wireless fidelity
WiMax	Worldwide interoperability for microwave access
WLL	Wireless local loop
WTO	World Trade Organization

INTRODUCTION

Few eras in human history have experienced such rapid change in the way societies communicate and interact as the present time. Driven by dramatic improvements in computing power and broadband access to the Internet, recent advances in computers and telecommunications have fundamentally changed the way we live. Access to modern telecommunications is no longer viewed as a luxury but rather as an economic and social necessity. Every aspect of modern life has felt this impact – telecommuting, telemedicine, online banking, online education and eGovernment are examples of this digital age.

Convergent technologies – networks, products and services that combine aspects of telecommunications, computing, media and entertainment – have changed the underlying nature of the telecom sector. Digital technology is replacing analog, Internet Protocol (IP) is supplanting circuit switching, and wireless technology compliments, and in some cases substitutes, traditional wireline networks. Telecom companies are reorganizing in order to meet these changing times. Telephone providers are upgrading their facilities to next generation networks (NGN), which combine voice, data, mobile and video services into a single interconnected platform. Carriers are quickly moving into the wireless area, deploying wireless in the local loop (WLL) and mobile wireless networks. In many cases, carriers are entering markets via partnerships, acquiring important technical expertise and capital. In countries with limited infrastructure, wireless subscribers are surpassing wireline users; in 2004, both Malaysia and India entered this category.

Emergence of the Internet, and the explosive growth in the sector that comes with it, is creating new threats and opportunities for traditional carriers. Competitive Internet service providers (ISPs) are offering dial-up access to their customers, while cable TV companies are bundling high speed Internet access over their coaxial video networks. Carriers are responding by upgrading their copper infrastructure with digital subscriber lines (DSL) to provide high speed Internet access to customers, along with a variety of value-added services (VAS) significantly outside the carriers' traditional services, notably, email, ecommerce, unified messaging and content services.

New innovations and competitive forces will continue to converge telecommunication networks with the computing, media and entertainment industries, and will force traditional telcos to deploy costly technology upgrades to remain competitive. In many worldwide markets, new competitive carriers have entered the market, some building their own networks, some reselling services provided by facility-based operators. Voiceover IP (VoIP) providers have emerged – notably Yahoo, Vonage and Skype – providing inexpensive voice communications and forcing traditional operators to introduce lower cost VoIP services of their own, thus cannibalizing their revenue stream. Cable TV providers are offering telephone and Internet services, and soon will bundle mobile services on a resale basis. Telephone carriers are likely to respond with a video offering of their own, requiring fiber to the premise (FTP), additional network upgrades and partnerships with media and entertainment companies.

Convergence has introduced other technologies that are disrupting traditional telecom business models. The Internet has forced TV and radio broadcasters, to develop online strategies, video broadcasting and Internet radio. Satellite radio has attracted eight million subscribers – a technology adoption rate faster that mobile phones. New services like Tivo have brought video-on-demand (VOD), and WiMax technology will transmit video wirelessly. Smart cards and radio frequency identification (RFID) are emerging applications which may further transform traditional methods of communications and the business models that support them.

Advances in technology are central to the telecom revolution, and understanding current and future technology is primary to the change management process. Too often, governments and policy-makers are behind the curve, meaning that they address technology issues only after they impact on the sector. As a case in point, look at the development of the Internet, VoIP and electronic commerce: regulatory institutions have been slow to adapt to the profound technological and economic realities of these advances.

Of course, understanding and forecasting the current technological revolution – and how it influences telecom networks, business models and socio-economic systems – is a daunting task. At the same time, understanding these trends is critical to managing the reform process. Without presaging the ultimate result of these innovations, several technological trends are emerging as influencing drivers within the sector:

- Technology adoption rates: Compared to older technologies, new telecom networks and services – such as satellite radio, cellular phones, computers and the Internet – have been quickly accepted by large segments of society, in part due to advances in telecommunications itself.
- Growth of wireless systems: The commercialization of various wireless technologies such as 3rd and 4th generation (3G, 4G) cellular technology, WLL, broadband transmissions systems such as broadband fixed wireless (WiFi) and WiWax, and RFID has impacted on the development of telecom equipment, networks and services.
- Satellite technology: New cost-effective satellite service providers such as PanAmSat play an increasingly significant role in global communications networks. Satellite radio and the Internet have become important segments of these networks.
- Data compression technology: Compression technologies such as TCP/IP (Internet), CDMA (wireless), MP3 (on-line audio), free space optic lasers and wavelength division multiplexing now allow higher data transfer rates and impact on the architecture of telecom systems and software.
- The rise of networking: The commercialization of the Internet, intranets and extranets changes the organizational structure and hierarchy of telecom networks. As the growth of local and wide area networks (LAN, WAN) and virtual private networks (VPN) continues, the installation of home networking systems (combining a variety of consumer electronics) may emerge as a major industry.
- Electronic commerce: A wide variety of products and services are available on-line, fundamentally altering traditional advertising, marketing, sales and customer care processes. Online security, intellectual property rights and identity theft are emerging issues.
- IP telephony: Circuit-switch voice systems are migrating toward VoIP technology, impacting on traditional equipment manufacturers and service providers.
- Intelligent networks and software: Network intelligence is devolving to the edge of the system via Internet routers. Software is becoming smarter and more user-friendly, with voice recognition systems likely be a major future application. Optical recognition is maturing, and radio frequency technology is emerging.
- Convergence: The borders between computing, telecom and entertainment will increasingly blur. New hybrid 'infocomm' or 'telematics' services are becoming increasingly commercialized. Technical and regulatory barriers between sectors and services will dissipate.

Of course, most of these trends are interconnected and, in turn, will influence the types of technologies, architectures and services provided to the end-user. Rather than be an absolute set of issues, these trends are not exclusive of others. Nonetheless, they may provide a starting point from which decision-makers can further understand future technologies and craft appropriate telecom strategies.

Of equal import is the global consensus role that telecommunications play in facilitating economic prosperity and social well-being. The telecom network provides the foundation for entire other sectors, from information technology to business process outsourcing (BPO) and eCommerce. In addition to a robust underlying telecom

network, the inherent nature of these sectors requires private investment, cross-border partnership and global commerce.

So what does this mean for Vietnam?

Vietnam's leadership understands the fundamental changes facing the global community and in the early 1990s launched Doi Moi (literally 'change and newness'), a policy aimed at modernizing Vietnam's economy by introducing competition in multiple sectors. Prior to this time, Vietnam's telecom sector was organized around the Postal, Telephone and Telegraph (PTT) model, where the monopoly government-owned PTT company was responsible for all aspects of postal service and telecom – from policy and regulation to telephone operations, postal delivery, and so on. In 1993, limited competition and small quantities of private investment were introduced into the telecommunications sector, and the monopoly status of the Vietnam Post and Telecommunications (VNPT) was ended. Furthermore, the government separated telecom operations, which remained with the VNPT, and created the Directorate General of Post and Telecommunications (DGPT), which later become the Ministry of Posts and Telecommunications (MPT). Recent new reports even suggest VNPT plans to raise capital for its cellular subsidiary via a public offering, rather than extending its Business Cooperation Contract (BCC) relationship with its current foreign partners.

These actions have resulted in rapid development of Vietnam's telecom sector over the last decade. In 1995, Vietnam had less than 1 million land lines and only 23,500 mobile connections. Only four people in 1,000 had a telephone line. The network was outdated and the Internet had not yet reached the country. Today, the country has more than 5M land lines and 2.5M mobile users, increasing telephone density to nearly 5%. Nearly 2M people have Internet accounts, and a data network has been established in all cities and provinces to ensure coverage of the entire country. Nearly 90% of the country's rural communities now have connectivity and new technologies, such as VOIP and WiFi, are used increasingly. But most importantly, network expansion and the introduction of advanced services continues apace.

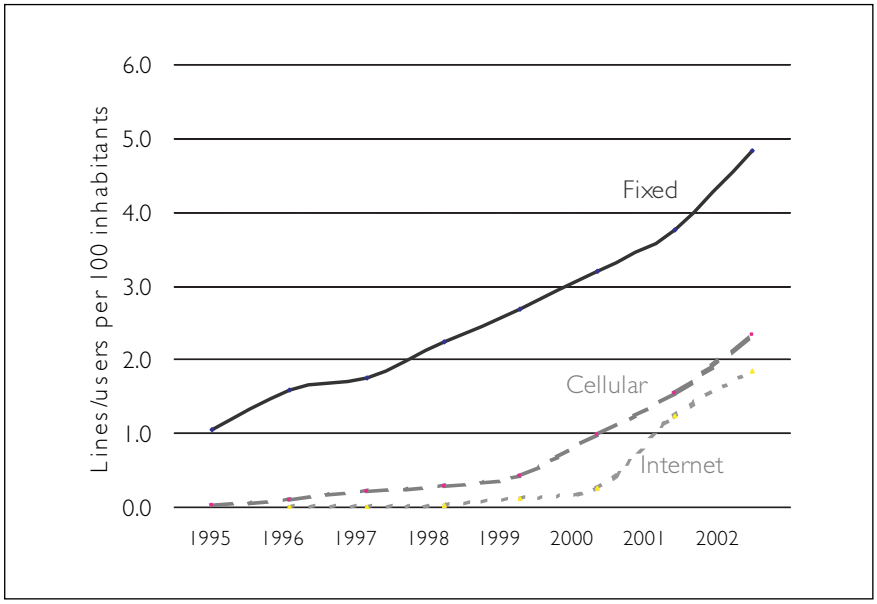
Despite Vietnam's impressive gains in network expansion, introducing competition and reducing prices, the country remains well behind other countries in the region – and far short of the country's aggressive objectives for the telecom sector. Legal and institutional reforms account for much of the gains to date – improved regulations, limited competition, private sector and foreign investment – but by global standards, the country's telecom sector remains restrictive and only semi-transparent. In addition, though there is competition in most telecom segments, most of the major players are state-owned and there is cross ownership between state-owned operators.

One noticeable aspect of Vietnam's telecom sector is that it does not have an independent regulatory body and there is no serious discourse about creating one. Internationally, an independent regulator is the accepted norm, with more than 100 countries subscribing to this model. This structure may prove useful for Vietnam in the long run, in order for the country to cope with increased competition, advanced technology, convergence issues and additional stakeholders, e.g. consumers, associations or manufacturers.

From a network perspective, Vietnam's expansion is one of the fastest in the world, albeit from a low start point. The number of main telephone lines grew from 0.4 per 100 inhabitants in 1995 to five in 100 by 2003, at a cumulative average growth rate (CAGR) of 45%. The number of cellular subscribers grew from 23,500 in 1995 to 1,480,000 in June 2002 with a CAGR of 80%. Teledensity is approaching 10 telephone lines per 100 inhabitants, a target set by the Government for 2005. By most accounts, Vietnam now has a fairly good physical infrastructure. Internet penetration has also grown rapidly since 2000. Figure 1 shows the growth in penetration rates for fixed, cellular and Internet services.

During 1998-2003, the average growth of Vietnam's network was 26.8%, one of the highest in the region, albeit from a low base. If the growth continues, Vietnam is on target to reach 10 million lines installed by 2006, and a teledensity

Figure 1: Penetration levels for telecom services in Vietnam



Source: ITU.

rate of 30% within a decade. To a certain extent, however, the easy growth is over (e.g. pent up demand in urban areas). To achieve this next stage of network expansion, Vietnam will need to invest billions of dollars in smaller cities and rural locations. Although Vietnam's penetration rate is high by regional standards, even with recent growth the country remains well behind many developing countries worldwide. Even if the country reaches its current targets, Vietnam will continue to lag behind its regional competitors (see Figure 2).

Vietnam's competitive environment is also improving, although at a very

Figure 2: Key telecommunications indicators of ASEAN member countries

Countries	Population (Mil 2002)	GDP per capita (US$ 2001)	Fixed line teledensity	Mobile teledensity	Total teledensity	Internet users per 10,000 inhabitants
Brunei Darussalam	0.358	12,447	25.95	46.8	72.75	1,023.00
Cambodia	13.79	254	0.28	2.54	2.82	21.76
Indonesia	212.11	1,002 (2003)	3.65	5.52	9.17	377.16
Lao PDR	5.53	324	1.57	3.64	5.21	27.11
Malaysia	24.53	3,684	18.30	41.30	59.60	3,196.00
Myanmar	48.98	148	0.61	0.03	0.64	2.07
The Philippines	79.48	913	4.17	10.36	23.53	437.60
Singapore	4.16	20,752	46.29	79.56	125.85	5,396.00
Thailand	61.89	1,874	10.51	26.04	36.54	775.61
Vietnam	81.25	406	4.84	2.02	6.86	184.62
ASEAN average	- -	4,150	11.60	21.40	33.03	1,144.37
Asia average	**- -**	**2,296**	**11.99**	**12.41**	**24.4**	**584.75**

Note: Countries above the ASEAN average are shaded.
Source: ITU world telecom indicators, 2003.

measured pace. Following key regulatory changes in the mid to late 1990s, the dominant position of the government owned monopoly, VNPT, was dismantled to a certain extent by the entry of other state-owned players. But Vietnam must act decisively and quickly if the government seriously intends to reach and sustain regional norms of telecommunications development.

Recent events however suggest that Vietnam is firmly on the road to liberalization. According to several government announcements, the country is moving forward with reforms, while at the same time, competitive players are moving forward with aggressive service rollouts and the introduction of new technology. Take the following examples:

- A recent government decision (No. 58/2005/QD-TTg) was taken to restructure VNPT into a parent-subsidiary consortium comprising a management board to manage the parent and the creation of separate post and telecom subsidiaries. This action, expected to be implemented in the fourth quarter of 2005, represents an important first step in reorganizing VNPT.
- In mobile communications, Vietnam Military Telecom Company (Viettel), a competitive government-owned operator, launched services in October 2004 and signed up 200,000 subscribers in its first four months of operations (a sign of pent up demand). The company plans to invest a further US$50M to achieve 1.1 million customers by October 2005. With several mobile operators now competing for business, prices will fall and soon Vietnam will have more mobile subscribers than traditional wireline subscribers.
- FPT Communications, the largest private ISP, ordered equipment to introduce video streaming technology to its customers.
- Hanoi Telecom signed an agreement with HK-based Hutchison Telecommunications to invest US$656M to build a CDMA-based mobile network in Hanoi.

These actions represent the trend and direction of Vietnam's liberalization program. The remainder of this report will focus on the overall competitive environment and the status of key telecommunication stakeholders.

Understanding the importance of telecommunication and information technology to the overall economy and well-being of its people, the government of Vietnam has set aggressive targets in order to revamp these sectors, build its NGN infrastructure, and introduce advanced technology and services to consumers and businesses. Vietnam's leadership also understands the obstacles, namely the existing gap between Vietnam and other countries, both in South East Asia as well as with important trade partners. There is a growing realization that the current structure of the country's telecom sector – market dominance by a state-owned company, limited private sector participation, persistent questions about regulatory transparency – is not conducive to meeting the country's aggressive targets. At the same time, there is a growing realization of the important role played by the private sector in importing capital, technology and expertise.

The purpose of this report is to provide insight into the current situation of Vietnam's telecom sector, placing a focus on recent regulatory changes, the status of competition and the actions required by the government to achieve its objectives for the sector. The report provides an introduction to the current status of the industry, highlights recent events and their impact and reviews key structural elements – government, operators and consumers. As a point of reference, where applicable, this report provides international and regional comparisons. The content of this report updates a previous version published in December 2004. This report does not intend to replace the December version but rather to supplement the debate and focus on recent changes within the telecom sector.

Chapter 1 provides an introduction and background to the current situation of Vietnam's telecom sector. In the early 1990s, the Government launched Doi Moi, a policy aimed at modernizing Vietnam's economy by introducing competition in multiple sectors. Prior to this time, Vietnam's telecom sector was organized around the PTT model, where the monopoly government-owned PPT company was responsible for all aspects of postal service and telecommunications – policy, regulation and operations. In 1993, limited competition and small

quantities of private investment were introduced into the telecom sector, and the monopoly status of the PTT was officially ended, although the company remains dominant even today. The government formed a ministry-level policy-making and regulatory body, combining both functions into a single agency. Limited amounts of private and foreign investment were permitted via joint stock companies and business cooperation contract (BCC) relationships with foreign partners. These actions resulted in rapid expansion of Vietnam's telecom sector, from less than 1M in 1995 (four lines per 1,000 people) to 7.5M today (five lines per 100 people). The country's network has been upgraded and the Internet is growing rapidly. New VoIP and WiFi services are available. However, despite Vietnam's impressive gains in innovation, network expansion and competition, the country remains well behind other countries in the region – and far short of the country's aggressive objectives for the telecom sector. Recent events, however, suggest the government is committed to moving forward with plans to reorganize the state-owned PTT, allow additional forms of private and foreign investment and push policies to liberalize the sector.

Chapter 2 offers insight into the current legal and institutional framework of Vietnam's telecom sector. Since 1993, the government has decreed a series of important, fundamental changes to its legal environment. In 2001, the government issued Vietnam's new strategy for the sector, highlighting key milestones and objectives to 2010 and a long-term vision to 2020. To follow up on this strategy, the government issued a supporting ordinance and decree that provided guidelines to implementing government policy. Subsequently, additional decrees and decisions have provided implementation details, and clarified legal and regulatory positions. While Vietnam is moving in the right direction, the legal and regulatory reform process remains incomplete. There are legitimate concerns that Vietnam's policies inhibit true competition, and limit private sector and foreign investment. The government also needs to strengthen and open the policy-making process, and initiate reforms to solidify transparency within the regulatory environment. Problems associated with Vietnam's interconnection are also discussed. These issues and others, such as cross-subsidies and adherence to treaties, are discussed in detail.

Chapter 3 provides an overview of the current market structure and the role of state ownership of Vietnam's telecom operators. While competition has been introduced in some sectors, the state-owned PTT continues to dominate the market – controlling nearly 95% of the aggregate telecom market. The PTT dominates every telecom segment, and owns non-core businesses in the equipment, engineering, construction and consulting fields. Many new market entrants also have state-ownership, thus limiting the role of private and foreign operators. The company also retains non-telco assets in the tourism, printing and insurance sectors. This dominant position inhibits true competition and prevents potential competitors from entering the market.

This section also reviews the role of private and foreign investment in Vietnam's telecom sector, focusing on the role of BCCs and the impact of Vietnam's bilateral trade agreement with the US which stipulates the opening of Vietnam's market to US investment. It provides a regional perspective on the role of private sector and foreign investment. To date, Vietnamese companies have participated in 11 BCCs in order to attract foreign investment and expertise. Interestingly, the most recent BCC is structured more like a joint venture, and has provisions to convert to that ownership model once Vietnamese law permits it. As a reference, the chapter also provides a brief review of the role of privatization of state-owned telecom assets in the region.

Chapter 4 discusses the dominant role of VNPT and explores the issue of anti-competitive behavior. The research provides anecdotal examples of anti-competitive practices commonly used by the VNPT to limit competition. These examples include unfair allocation of network facilities, high prices for use of network facilities, cross-subsidization, refusal of services, forced use of VNPT services and abuse of technical measures to block competitors' services. This chapter also reviews the strategic rationale for privatization of VNPT.

Chapter 5 provides the results of the market survey of telecom

users based on responses from 89 Vietnamese companies. The survey covered types of services used, quality and price. This section provides details regarding the survey respondents, and makes the following conclusions:

- Vietnam appears to have a well-run and reliable telecom network that provides relatively fast connections, but often slow transmission speeds.
- Although new services are available, most firms continue to focus their telecom use on traditional telephony and Internet services, suggesting that important platforms for innovation are yet to be exploited.
- Most business concerns focus on the relatively high prices of Vietnam's telecom services. Price reductions would lead to substantial increase in demand for telecom services. A price reduction of one-third would likely lead to a 25-30% expansion of the telecom market.
- Improved service delivery (including lower prices) would translate into improved firm level competitiveness through significantly higher turnover and revenues, improved profitability and an increased rate of innovation.

Chapter 6 offers a framework which can be used to move forward, highlighting key areas for action by the Vietnamese government. These recommendations build on previous work conducted by the World Bank and the Vietnam Competitiveness Initiative (VNCI), and focus on the need to build a consensus for reform among the following key stakeholders:

- Government – strategy, policy and regulation.
- Business – operators, vendors and related businesses.
- Consumers and Civil Society – business and residential users, unions, trade groups, et al.

Specific recommendations are made to improve the following aspects of Vietnam's telecommunications sector:

- Telecommunications Policy.
- Regulatory Transparency.
- Strengthen Vietnam's interconnection regime.
- Strengthen Vietnam's licensing regime.
- Tariff rebalancing.
- VNPT reform.

Finally, the VNCI highlights the need to organize a Vietnamese Telecom Stakeholder Conference, the aim of which would be to bring together key decision-makers and stakeholders to discuss important issues associated with the ongoing reform and liberalization process. The conference would not only contribute to the debate but also build a consensus of opinion among intellectual leaders and decision-makers which will assist Vietnam to introduce a vibrant and competitive telecom environment.

Observers of Vietnam's recent history are rightly optimistic about the country's recent economic performance and its commitment to reform. With economic growth of 7.7% in 2004, based in large part on liberalization across the economic spectrum, and an 8.5% target for 2005, Vietnam has a bright future. The Asian Development Bank (ADB) forecasts economic growth of 7.6% in 2005. However, there are concerns about the pace of reform and strong regional competitors. The government reform process began in the early 1990s but important aspects of economic liberalization – including key aspects within the telecom sector – remain incomplete. While the Government is moving in the right direction, 15 years into the liberalization process there are serious questions about the pace and depth of reform.

Vietnam has serious economic and commercial competition from major economies, both developed and developing. Vietnamese companies, and foreign company's deciding to invest in the region, compete and compare Vietnam to technology powerhouses like Singapore, Taiwan, Japan and Korea. Vietnam also borders China and neighbors India – two emerging powers with highly competitive aspirations in the sectors of manufacturing, outsourcing and technology innovation. Other regional players include Malaysia, Indonesia and the Philippines. All of these countries have highly advanced telecom frameworks.

The path for Vietnam is clear – reform the VNPT, create an independent regulatory body, introduce real competition and divest the government from telecom operations. The open question remains: when?

LEGAL AND INSTITUTIONAL FRAMEWORK

Vietnam has made important fundamental changes to its legal environment with the objective of creating a robust and competitive telecom sector, which in turn provides the foundation for economic growth for telecom and IT-enabled business. However, Vietnam's reform process remains incomplete. There are legitimate concerns that the country's policies inhibit competition, and limit private sector and foreign investment. In terms of transparency of regulations, the current regulatory body doesn't fully meet international norms of independence, and this effects licensing, non-discriminatory interconnection and cross-subsidies in tariffs. In addition, Vietnam is behind schedule in implementing its obligations under the bilateral agreement with the United States, namely access for US investors. These issues combined produce uncertainty and risk to new market entrants and investors, which in turn limits network expansion, the introduction of new services and overall economic growth.

Liberalizing Vietnam's telecom sector, however, is not a short-term proposition; rather the process requires a long-term approach that impacts on three primary government activities: developing a strategy and policy; providing the legal foundation for action, for example, through laws and regulations; and ensuring efficient implementation of a consistent and transparent regulatory environment that will ensure effective policy implementation and compliance. This chapter deals only with the policy aspects of government strategy, legislation, policy, regulation, regional comparisons and international commitments.

Ministries responsible for Vietnam's Telecommunications Policy

As with most governments, setting policy for a complex sector like telecommunications requires action from multiple ministries and agencies. Given the complexity of

Figure 3: Allocation of major responsibilities in telecommunications policy

Agency	Responsibilities
Deputy Prime Ministers (DPMs)	Of the four DPMs, one holds the portfolio for telecom, one holds the portfolio for ICT, and one holds the e-government portfolio.
Office of Government (OOG)	This office serves as the PMs and DPMs secretariat and clearing house, and also coordinates inter-departmental policy and institutional initiatives. OOG runs the in-house e-government program, which focuses on building intra-departmental and provincial networks.
Ministry of Post and Telematics (MPT)	Sets policy for and regulates the telecom sector; representative of the State's capital interests in facility-based operators, including the dominant VNPT.
Ministry of Trade (MoT)	Sets policy and develops legislation and programs for e-commerce and trade.
Ministry of Science and Technology (MOST)	Develops R&D programs for telecom and ICT; sets ICT standards. Was formerly the chief policy actor in ICT, but this role was changed with the creation of MPT.
Ministry of Planning and Investment (MPI)	Ensures sufficient and timely investment is available for approved development in IT (defined broadly to include telecom).
National Steering Committee on ICT	Monitors implementation of the national IT plan (which covers telecom, ICT, and the ICT projects, functions and responsibilities of all ministries and agencies).

Source: World Bank.

the telecom sector and its impact on the entire economy, Vietnam's policy-making rightly includes multiple organizations. Figure 3 outlines the roles and responsibilities of various government bodies in crafting national policy.

Ministry of Posts and Telematics

Based on recent changes in the telecom law, the MPT is the primary driver of telecom strategy, policy and regulation. To emphasize its role in developing the IT sector, the MPT recently changed its name to the Ministry of Post and Telematics. Unlike many countries that have created an independent, autonomous regulatory body, the MPT is the state administration in charge of policy-making and regulatory matters in post, telecom, IT, electronics, the Internet, radio transmission and emission techniques, radio-frequency management, and national information infrastructure. The MPT manages public services as well as having control over the state capital (for example, investment), on behalf of government and as stipulated by laws and regulations in post, telecommunication and IT enterprises. Its main functions include:

Policy-making functions:

- Submit to government drafts of laws, ordinances, regulations, strategies and development plans on posts, telecom and IT.
- Give guidance in implementation of laws, ordinances and regulations, as well as development strategies and plans related to posts, telecom and IT.
- Conduct international cooperation activities in posts, telecom and IT.

Regulatory functions:

- Regulate access to and inter-connection between public switched telephone networks, and specialized and private networks.
- Regulate the electronics and IT industry development plan.
- Regulate charges and tariffs in the fields of post, telecom and IT.
- Plan, assign and allocate the radio frequency spectrum.
- Control and monitor the radio frequency spectrum and radio equipment; organize radio-frequency, satellite orbit registration and coordination.
- Grant licenses in post, telecom, radio frequency and the Internet.
- Regulate the quality of post, telecom and IT networks, plants, products and services.
- Regulate numbering resources, codes and domain names.
- Inspect all activities and settle all regulatory breaches in the fields of post, telecom and IT[1].

Telecommunications development strategy and policy

Issued by the Government in 2001, Vietnam's Post and Telecommunications Development Strategy (the Strategy) lays out policy objectives through 2010 and provides a long-term vision through 2020. The underlying principles of the Strategy are quite liberal, outlining the government's objective of introducing competition and private sector ownership, and integrating Vietnam into the increasingly interconnected global community.

The following Strategy excerpts emphasize the government's clear commitment to fundamental long-term liberalization of the country's telecom sector:

- Strategy Principle Two: 'To make full use of all resources of the country, and to facilitate and make conducive conditions for all economic sectors (in term of ownership) to participate in the development of post and telecommunications in a transparent, competitive and fair environment administered by the State with an appropriate mechanism.'
- Strategy Principle Three: 'To actively make international integration and development in parallel with ensuring national security and information security.'

The Strategy also sets strategic objectives for the development of the sector, notably to:

- position the telecom industry as a leading sector that drives and enables overall economic growth in all regions of the country;
- issue policy and regulatory documents to facilitate IT-enabled services (ITES);
- develop a national information infrastructure (NII) to deploy high-capacity communications and innovative technology throughout the entire country;
- ensure the introduction of a wide range of services;
- by the year 2010, increase telephone and Internet

1. Source: MPT's website

penetration rates to the regional average;

- introduce competition, with a target for competitive operators obtaining a 25-30% market share by 2005, and 40-50% by the year 2010; and
- reform tariffs to lower consumer costs in comparison with regional benchmarks.

This Strategy document represented a distinct turning point in the Vietnamese liberalization process because it advocated a dramatic change in policy. In addition to driving fundamental structural reform by the government, the Strategy provides guidelines for new roles and responsibilities and, most importantly, sets specific objectives and targets to measure success. As a first step in a long-term initiative, the Strategy was an important contribution to subsequent laws and regulations.

The National Institute of Post and Telecommunications Strategy (NIPTS), an independent unit of the MPT, drafted a complementary strategy for information and communication technology (ICT). The objectives, which included the expansion of the telecom network, also included goals targeting the 'information sector'. The NIPTS goals for telecom and ICT for the year 2010 included the following detailed specific objectives:

- Achieve teledensity of 25-26 lines per 100 people by 201, 28-30 total lines by 2020.
- Achieve a total teledensity by household of 60% by 2010 and 100% by 2020.
- Have 30% of all commercial transactions occur online by 2010.

Telecommunications law

Following the development of Vietnam's new strategy to foster growth and development in its telecom sector, the government moved to codify these objectives in law. Accordingly, the government has issued two legal rulings in the past few years: the Ordinance on Post and Telecommunications (the Ordinance) and Decree 160 Provisions Regarding Competition: Decree on Telecommunications (the Decree). Together, these laws form the legal basis for the MPT's subsequent regulatory rulings, arbitration or legal actions. The following section highlights the key policy and regulatory issues dealt with in these two laws[2].

Ordinance on Post and Telecommunications 2002

The Ordinance was issued by the Standing Committee of the National Assembly in 2002, six months after publication of the Strategy. The law reiterates and reinforces the policy principles outlined in the Strategy, adding important implementation details and clarifications to the government strategy. It also outlined specific mechanisms – for example, policies and tools – that can be used by the regulator. These mechanisms include licensing, market dominance, interconnection, co-location and universal service. The following summarizes the important principles embodied in the Ordinance:

- Licensing: The Ordinance defines two types of licenses for telecom enterprises, with durations ranging from 10 years for network services to 15 years for service-based operations and 25 years for international cable landings:
  - Network or facility based operations (FBO): An FBO owns and operates its telecom network. FBOs sell services directly to an end-user, or sell wholesale services to companies that resell its service. In Vietnam, FBO licenses are only issued to state-owned enterprises (SOEs), defined as an operator owned by the government, wholly or in part. The ordinance outlines the concept of a 'golden share', which presents a share of the company that allows veto rights over certain corporate decisions.
  - Service-based operations (SBO): An SBO provides a service that does not require network facilities, or leases on a wholesale basis network facilities from an SBO for resale to the end-user. Ownership in SBO licensees is open to complete private sector ownership.
- Market dominance: Defines operators with a dominant market share as those that have more than 30% of the market of a particular service.

2. It is important to note that these laws do not adequately deal with three important policy issues: competition between multiple SOEs, possible privatization of SOEs and unbundling of the local loop. Any action on these issues, or inaction, has important implications for the country's telecommunications sector.

- Regulations may regulate dominant operators, e.g., market share, pricing, service quality, cost accounting, et al.
- Dominant carriers are prohibited from using anti-competitive practices, e.g., cross subsidies, below cost pricing, high wholesale rates, et al.
- Non-dominant operators set their own prices, including promotional packages (while the regulatory can control dominant carrier pricing).
- Lower interconnection charges applied to non-dominant firms also provide new entrants with some cost advantage.

- Interconnection: Stipulates that all telecom enterprises have the right to 'link their own network to those of other telecom enterprises and shall be obliged to allow those other telecom enterprises to link and access their own networks or services subject to fair and reasonable conditions'.
  - Mandates access and interconnection points based on economic and technical feasibility.
  - Stipulates that interconnection agreements be negotiated between operators.
  - Allows interconnection charges regulated by the MPT, using cost-based pricing.
  - Defines co-location, an integral aspect of interconnection, as 'shared use of linking points and technical infrastructure facilities via a linking agreement between two signed parties'.
- Tariffs: Enterprises are free to decide on charges for their own services, except for charges involving community service or interconnection, and those for telecom services with market dominance.
- Universal Services: Established fund with contributions from telecom enterprises and other sources.

Decree 160 Provisions Regarding Competition: Decree on Telecommunications

Building on the Strategy and Ordinance, both of which support liberalization and competition, Decree 160 was issued by the Government in September, 2004. The specific additional details are as follows:

- Market dominance: Sets dominance at 30% of essential facilities. Defines essential facilities as local loops in a geographic area, domestic or international long-distance channels and base radio stations of the mobile network. Requires dominant carriers to:
  - develop a master plan for network investments access points, interconnection and anticipated increases in network traffic;
  - create favorable conditions for the negotiation and execution of interconnection of networks and services for telecom companies in a fair and reasonable manner; and
  - prepare and submit to MPT for approval a Master Interconnection Agreement, a template which will be made public and used by companies requesting interconnection.
- Interconnection: Reiterates key aspects of Ordinance and clarifies interconnection issues.
  - Reiterates that interconnection charges shall be based on cost, and are reasonably broken-down according to network components or service processes, without discrimination between different types of services.
  - Elaborates the principle that the interconnection must ensure that users are free to select any service provider they want.
  - Interconnection charge related to universal services must be clearly defined.

Telecommunications regulations

During the past year, the MPT has issued a variety of rulings to clarify its strategy, policy and administrative procedures. These rulings cover the full gamut of the Ministry's remit, including telecommunications, post and IT sectors. Important issues addressed include the creation of the Vietnam Public Telecommunications Fund, clarification on tariff issues, equipment standards issues, the creation of a technology directorate and several IT specific orders. Of particular note, in 2003, after a long delay, the MPT legalized VoIP services, allowing the public to make low-cost international calls. Figure 4 provides an overview of recent decisions with hyperlinks to the detailed text:

Setting tariffs

MPT regulates tariffs on those operators with a dominant market

Figure 4: Recent MPT regulations

Regulation number	Date issued	Summary
04/2004/TT-BBCVT	29/11/2004	Provide sanctioning of administrative violations in post, telecom and radio frequencies
191/2004/QD-TTg	8/11/2004	Set up organization and operation of Vietnam Public Telecommunications Service Fund
41/2004/QD- BBCVT	5/10/2004	Promulgate regulation on telecom equipment standards
42/2004/QD-BBCVT	5/10/2004	Promulgate list of telecom equipment that requires standard conformity stamps
07/2004/CT-BBCVT	19/7/2004	Enhance management of public Internet agents
06/2004/CT-BBCVT	7/5/2004	Clarify position on safety and security for post, telecommunication and Internet information
235/QD-TTg	2/3/2004	Approve project on open-source software application and development of in Vietnam, 2004-2008
101/2004/ND-CP	25/2/2004	Establish provincial/municipal services of post and telematics in provinces and centrally-run cities
16/BBCVT-KHTC	6/1/2004	Price setting rules for enterprises Cost based tariffs
217/2003/QD-TTg	27/10/2003	Outline dominance: telecom providers with less than 30% market share can set their own prices
99/2003/ND-CP	28/8/2003	Promulgate the regulation on high-tech parks
148 /2003/QD-BBCVT	26/8/2003	Set provisional interconnection fees set and lowered from previous levels
75/2003/ND-CP	26/6/2003	Define organization and operation of MPT technology inspectorate
92/2003/QD-BBCVT	26/5/2003	Promulgate regulation on Internet resource management and use, for example, domain names
47/2003/QD-BBCVT	20/3/2003	Provide table of international telcos using the public switched telephone network (PSTN)
49/2003/QD-BBCVT	20/3/2003	Provide table of post-paid GSM mobile phone charges
53/2003/QD-BBCVT	20/3/2003	Regulates circuit charges applied to Internet exchange providers (IXPs) and Internet service providers (ISPs)
55/2003/QD-BBCVT	20/3/2003	Promulgate tariff table of the international telecoms circuit leasing service applied to IXPs for access
57/2003/QD-BBCVT	20/3/2003	Issue of tariff of direct international Internet gate (IIG) installation and lease of IXPs
90/2002/ND-CP	11/11/2002	Outline functions, tasks, power and organizational structure of MPT
43/2002/PL-UBTVQH10	1/10/2002	Regulate telecom networks and services, licensing procedures and prices; defines types of telecom services
33/2002/QD-TTg	8/2/2002	Approve the plan for Internet development for 2001-5
158/2001/QD- TTg	18/10/2001	Approve VNPT strategies through 2010 and 2020

Regulation number	Date issued	Summary
55/2001/ND-CP	23/8/2001	Outlines management, provision and use of Internet services
81/2001/QD-TTg	24/5/2001	Sets out action to implement Politburo Directive 58-CT/TW and step up the application and development of ICT 2001-5
DGPT Directive 01/2001/TCBD	4/1/2001	Set implementation of Politburo Directive 58-CT/TW in the areas of post, telecom and IT
Politburo Directive 58-CT/TW	17/10/2000	Directs increased development of IT, telecom and related areas
99/1998/QD-TTg	26/5/1998	Promulgate regulation of posts and telecom prices
Decree No. 79/CP	19/6/1997	Promulgate administration of disputes in post, telecom and spectrum

Source: Djankov, S. et al, 2003. *The Regulation of Entry*, p. 47.

share, whereas other operators are allowed to set their own tariffs. Tariffs in Vietnam are still cross-subsidized and are not aligned to costs. In 2001, tariffs for international calls were among the highest in the world, while local and national tariffs are relatively cheap in comparison with the regional average[3].

Under a timetable to reduce telecom fees, VNPT has already scaled back telephone charges nine times over the last four years. Mobile phone rates have recently undergone five consecutive reductions. The MPT introduced several provisions in 2002 and 2003 to reduce tariffs and make them comparable to those of regional countries. As indicated in Figure 5, most international tariffs were reduced by 50%, and other services such as cellular, Internet and leased circuits were reduced from 10% to 30%. These actions should drive tariffs towards their real cost; however, a detailed tariff re-balancing process has yet to be defined.

3. ITU, 'Vietnam Internet Case Study', March 2002.

Figure 5: Tariffs for international service in Vietnam, $US/minute

Service	Dec. 2001	July 2002	Jan. 2003	April 2003
Calls to other ASEAN countries	1.70 – 2.30	1.50 – 1.70	1.30 – 1.40	0.90 – 1.30
Calls to Europe, USA, Australia	2.30 – 2.00	1.80 – 2.00	1.50 – 1.70	1.00 – 1.40
Calls to all international destinations by VoIP			1.2	0.75

Despite the dramatic decrease in tariffs, prices in Vietnam remain out of sync with regional and global norms. Since local and long distance services are cross subsidized, local prices are well below ASEAN averages, for example Singapore, while international long distance calls are higher.

A good barometer for tariffs is the US Federal Communications Commission (FCC) benchmarks for its international settlement policy. The FCC sets target settlement rates, which in turn are a key determinant of prices for international calls. The FCC divides countries into four groups based on economic development levels as determined by information from the International Telecommunications Union (ITU) and World Bank. As such, the following benchmark rates apply:

- Upper Income: 15¢.
- Upper Middle Income: 19¢.
- Lower Middle Income: 19¢.
- Lower Income: 23¢.

The FCC tracks operators that dominate the market and are hence able to set rates above global norms. The FCC exempts dominant carriers that negotiate prices below its benchmarks. To date, 163 countries meet these benchmarks; Vietnam does not[4]. Classified as a low income country, the FCC's target international tariff for countries where the carrier has market dominance is $0.23. In January 2005, the FCC calculated

4. FCC Public Notice DA 04-1584, May 28, 2004 (updated international settlement policy) and FCC website.

the US/Vietnam rate at $1.19 per minute plus $2.00 per connection – well above FCC benchmarks and international norms.

Interconnection

Interconnection between telecommunications networks is a perquisite for an efficient competitive telecommunications sector. Interconnection transfers the transmission of voice, data and video communications from one network provider to another, allowing traffic originating in one network to be terminated on another. For example, an international voice call originating in Vietnam could interconnect with the landline network which transfers the call to an international gateway. In turn, the call may interconnect with multiple international carriers before the call is terminated at its international destination. The proper working of interconnecting allows seamless communications for the end-user.

Interconnection promotes efficiencies in telecommunication carriers allowing operators to share network assets; thus a carrier doesn't need to duplicate network construction when the volume of traffic doesn't justify the expense. In newly competitive markets, new entrants can provide services without the massive investments needed to set up their own network backbone, local loop or other major facility. Interconnection between competing networks is now widely seen as a critical mechanism for introducing market forces into a monopolistic telecommunications environment. According to a recent report by the Global Internet Policy Initiative (GIPI) Vietnam, a global non-governmental organization that promotes legal and policy reform which in turn supports a robust Internet environment, 'interconnection is the single most important determinant of a successful transition from monopoly to competitive telecommunications markets'[5].

The basis for Vietnam's interconnection regime is included in the Ordinance, which deals with interconnection by stipulating that all telecom enterprises have the right to 'link their own network to those of other telecom enterprises and shall be obliged to allow those other telecom enterprises to link and access their own networks or services subject to fair and reasonable conditions'. Providing access and interconnection at technically and economically feasible points is mandatory for service providers that hold 'essential equipment and facilities'. The Ordinance also states that interconnection agreements are to be negotiated between operators with interconnection charges regulated by MPT. The key regulations provide for the following:

- Interconnection rates should be 'cost-oriented': The Ordinance states that calculation of interconnection charges will be based on 'gia thanh', which means the cost of provision of a product. There is a provision that allows carriers to include the cost of the community service obligations (CSOs) in the cost baseline. While forming the basis for Vietnam's interconnection regime, there are two areas where the Ordinance lacks sufficient detail:
  - What is the precise definition of cost? Although most countries define and calculate cost using a forward-looking, total service, long-run incremental cost (TSLRIC) method, the process in Vietnam of costing network services is a complicated and difficult task.
  - What is the incremental to interconnect charges associated with CSO?
- Partial unbundling of network components: The Ordinance prohibits unreasonable refusal to interconnect by bottleneck facility owners, provided interconnection is economically and technically feasible. However, the interconnection regulations have not prescribed sufficient unbundling, i.e. the access seeker should not be required to pay for interconnection or network components it does not need in order to provide its service.
- Interconnection at all feasible points in the network: The Ordinance appears to satisfy this requirement broadly, but there is no clear statement relating to the requirement.

Co-location, a key enabler of interconnection, is also covered in the Ordinance. Article 43(2) stipulates 'shared use of linking points and technical infrastructure facilities via linking agreement between the two signed parties'. If an interconnection agreement

5. The report, 'Promoting Internet Policy and Regulatory Reform in Vietnam, Assessment Report', March 2004, Status of Telecommunications Development in Vietnam is available at http://www.gipi-vn.org/

cannot be reached within a 45-day time limit (a period set by subsequent MPT regulations), the MPT can intervene in the process. The MPT's decision can be challenged via the Administrative Courts; however, there are separate issues within the legal system that make this option impractical.

Further clarifications to Vietnam's interconnection regime are included in the MPT's Decision 148/2003/QD-BBCVT, dated 28 August 2003, which specifies that the charges for interconnection consist of two parts: a) interconnection charges; and b) costs for establishing the interconnection route. Interconnection charges are determined:

- on the basis of the cost of interconnection;
- with the principle of no discrimination between different services, between different telecom companies or between members of a telecom companies with other telecom companies;
- on the basis of rational unbundling of network components or stages of services; and
- in comparison with the level of interconnection charges in other countries in the region.

The Government further elaborated on the issue of interconnection charges in the Decision of the Prime Minister 217/2003/QD-TTg, dated October 2003, and Decree on Telecom 160/2004/ND-CP, dated September 2004, which addressed the problem of interconnection comprehensively but did not change the details specified in the previous regulations. Despite these rulings, some potential problems with Vietnam's interconnection regime remain, namely anti-competitive behavior relating to interconnection, e.g., 'technical problems' and pricing constraints. Issues related to these two behaviors are outlined below.

Technical reasons for delaying interconnection

There are many technical reasons that can be used as excuses for not providing fair interconnection. These 'technical problems' often result in long delays to interconnection. One recent example involves S-Fone, a cellular upstart launched in mid-2003. An essential requirement for a new mobile phone network is the ability to connect messaging services with other incumbent cellular providers, Vinaphone and Mobifone. The agreement between the new market entrant on the incumbent called for interconnection by December 2003, but it wasn't implemented until mid-2004 – a full year after service started. During VNCI interviews, statements from S-Fone management highlight the difficulties of executing interconnection:

> *" Obviously, there are some technical problems in connecting different networks, but they are not big problems. The real problem is whether VNPT wants S-Fone to be connected or not."*

> *" Cityphone is not compatible but connected quickly with VNPT mobile networks, while it takes a very long time in the case of S-Fone. If VNPT has a cooperative attitude, only 10 days are needed to settle everything."*

VNPT also is alleged to have used technical reasons to deny interconnection 'at any technically feasible point'. The most notable example is the requirement of VNPT that S-Fone be connected with VNPT mobile networks not directly through a tandem switch, but indirectly through a toll switch, which is managed by VNPT. This has forced S-Fone to pay an additional 250 VND per minute. According to S-Fone, this extra charge costs the company more than 1.4B VND in the last six months of 2003, and 1B-2B VND in 2004. These extra charges inhibit the company's competitiveness and profitability. It is noteworthy that Mobifone, another cellular competitor, pays the same extra charges.

According to a manager from S-Fone, such indirect interconnection via a toll switch was understandable and acceptable in the earlier period of interconnection, when VNPT was unfamiliar with the technical issues of interconnecting a CDMA-based to a GSM-based network. However, technical capability has improved but the situation has remained unchanged.

In July 2004, S-Fone made a request to MPT to intervene to force VNPT to provide direct interconnection. The MPT replied that it was not able to consider a solution at least until the beginning of 2005. S-Fone subsequently

requested in September 2004 that if the interconnection is still made via a toll switch, then the extra toll interconnection fee of 250 VND per minute be waived for S-Fone. However, so far no reply has been provided by MPT or VNPT. According to the same manager:

> *" VNPT really has everything relating to telecommunications infrastructure. New entities in this industry have to borrow or hire facilities or infrastructure of VNPT. The problem is that it is always difficult to borrow or hire them. Sometimes it takes considerable time and sometimes requires large fees. Even negotiation with VNPT is also a controversial matter....MobiFone and Vinaphone are monopolists in Vietnam. I understand that they do not want us to interconnect with our SMS [short message service] services. In my opinion, if they are not willing to connect messaging services with S-Fone, MPT should intervene in the arrangement and force VNPT to allow the interconnection of messages between MobiFone, Vinaphone and our network as soon as possible. If MPT had done so, our messaging services would have been connected within at most six months[6]."*

Commercial/pricing issue of interconnection

Interconnection charges by VNPT are considered by other telecom companies as much too high, and represent 60-70% of the competitive carriers' costs. Such high-cost tariffs reduce the price competition among telecom services providers. One of the problems leading to high interconnection charges is that, so far, such charges have not been calculated on a 'cost-based' basis. Rather, interconnection charges are approved by MPT based on information provided by VNPT. However, as the accounting system of VNPT is not independent, it is not possible to actually calculate interconnection costs. Accordingly, interconnection costs may be overestimated, and result in inflated charges for competitive carriers.

Another problem is that VNPT uses its dominant position to impose an extra burden on the interconnecting telecom companies. According to MPT Decision 148, the cost for establishing and maintaining an interconnection route between two interconnecting networks should be borne equally by each network. However, in reality in many instances, provincial PTT new entrants bare the cost for extra cable upgrades and other physical facilities. Since VNPT states that the required infrastructure is not available, competitors have little option but to pay the entire expense if these operators need to interconnect their services.

As these examples suggest, despite the obvious benefits of interconnection, implementing a progressive and efficient 'interconnection regime' is a very difficult task that often gets mired in controversy and the details of execution. Disputes on interconnection issues are common in many countries, and Vietnam is no exception. Although liberal and competitive elements have been introduced to the institutional and regulatory regime governing interconnection, there have been many complaints from competitive carriers in Vietnam. While the Vietnamese regulations governing interconnection are favorable, some important regulation uncertainties remain and, not surprisingly, there have been difficulties in actually executing interconnection agreements between carriers.

International commitments

The regulatory framework just described is generally consistent with the requirements for avoiding anti-competitive actions provided in the international agreements that Vietnam has signed to date. In particular, the Bilateral Trade Agreement between the United States and Vietnam (BTA), which Vietnam signed in July, 2000, incorporates key provisions on competition from the World Trade Organization (WTO), General Agreement on Trade in Services (GATS), the GATS Annex on Telecommunications and the WTO Reference Paper on Basic Telecommunications (the Reference Paper).

While the BTA includes, by reference, required actions with regard to international telecom accords, the agreement has specific objectives related to permitting US foreign investment in the Vietnamese telecommunications sector. Figure 6 outlines the level of

6. It is interesting to note that the short messaging service (SMS) between S-Fone and Viettel Mobile was interconnected after several months, and direct interconnection was made via a tandem switch.

US investment during the course of the BTA's implementation (Vietnam's international commitments pertaining to the BTA and its referenced documents, as well as compliance and remediation actions, are summarized in Figure 7).

Vietnam's regulatory framework is already consistent with many of the international commitments that Vietnam has made regarding the telecom sector, and with those that it is likely to make in the course of WTO accession. At the same time, there are gaps that need to be filled by additional regulations and by the amendment of existing ones. The recommendation of this report is that the Reference Paper be the first point of focus as it opens the door to other WTO benefits. The Paper has a pro-competitive and telecom-specific character and will help considerably towards efforts to complete Vietnam's telecommunications regulatory framework.

The official policy and regulatory documents discussed in this chapter are fairly open to competition, as well as to market principles, and do not overemphasize the need for control by the State in the telecom sector. Completion of Vietnam's regulatory framework in a pro-competitive manner should not be difficult. However, despite the officially stated policy, government authorities have unofficially expressed cautious opinions about the level at which the sector should be opened to private and foreign participation, as well as the appropriate level of control by the State. The opinions of State officials indicate that the key issue is one of maintaining appropriate State control. Monopoly by the State over certain resources is instrumental for State control, but does not seem to be a value that is pursued for its own sake. As a result, completion of a regulatory framework for Vietnam that will enhance competition in this sector may not be as smooth as it appears at first sight.

Figure 6: Vietnam-US BTA for foreign investment in telecommunications

Phase	Market segment	US investment	Timing	Deadline
0	All market segments	0%	Upon BTA	Dec 2001
I	Value-added telecom services	Up to 50%	2 years after agreement	Year end 2003
II	Value-added Internet services	Up to 50%	3 years after agreement	Year end 2004
III	Mobile, leased lines and satellite services	Up to 49%	4 years after agreement	Year end 2005
IV	Fixed line services (including long-distance)	Up to 45%	6 years after agreement	Year end 2007

Figure 7 : Overview of Vietnam's international treaty obligations

Treaty	Provision	Progress towards compliance	Action taken/required
Bilateral Trade Agreement (BTA)			
• Chapter III: Services • Chapter VI: Transparency and the Right to Appeal • Chapter IV: Development of Investment Relations (supplemented by Annex H and the Exchange of Letters)	• Eliminate non-tariff barriers to U.S. exports, including telecom exports. • Provide effective protection of U.S. intellectual property rights. • Open Vietnam's market to U.S. service providers, e.g., foreign investment. • Create fair and transparent rules and regulations for U.S. investors.	• Vietnam has implemented some aspects of the BTA, but is currently behind schedule.	• Government has established working group to coordinate efforts to revamp laws and regulations, however, Vietnam lacks technical expertise and resources. • U.S. government providing technical assistance to Vietnam for technical advice, training and materials to facilitate reforms necessary to meet the BTA's complex requirements.
The GATS Annex on Telecommunications (Reference to the BTA with the exception of Paragraphs 6 and 7)			
• Paragraph 4	• Requires the development of a transparent regulatory framework, e.g., publicly available information and notification of standards, tariffs, licensing, et al.	• Arguably, Vietnam's regulatory framework is consistent with these conditions.	
• Paragraph 5	• Requires access to the public network, e.g., interconnection and co-location.	• Lack of explicit reference to a non-discriminatory interconnection could be interpreted as non-compliance by international norms.	• MTP should clarify its interconnection policy, explicitly defining and preventing non-discriminatory behavior.
WTO Reference Paper on Basic Telecommunications (Referenced by BTA)			
• Definitions	• Align Vietnam's legal definitions to WTO definitions.	• Compliant, although some differences in definitions exist.	
• Competitive safeguards	• Cross-subsidization.	• Vietnam had a policy for cross-subsidization; current framework does not completely eliminate it.	• Develop better cost accounting, e.g., chart of accounts and cost allocation, to identify and eliminate subsidies.
	• Misuse of information about competitors.	• Largely compliant, but has narrow definition of 'misuse'.	• Strengthen guidelines re: 'misuse' via government decree or order.
	• Withholding necessary technical and commercial information.	• Compliant based on Law on Competition.	• Clearly link telecom sector to Vietnam Competition Law.
• Interconnection	• Detailed and technical criteria to meet global interconnections standards.	• Partially compliant, but missing key aspects of connection regime.	• Issue order re: interconnection costing and technical delays.

Treaty	Provision	Progress towards compliance	Action taken/required
WTO Reference Paper on Basic Telecommunications (Referenced by BTA) (continued)			
• Universal service	• Right to define the kind of universal service obligation (such obligations will not be regarded as anti-competitive), provided transparent and neutral administration.	• Undetermined as Vietnam is currently developing its Universal Service institutional structures and policies.	
• Public availability of licensing criteria	• Licensing criteria and time required to reach a decision, including the terms and conditions of individual licenses. • Reasons for license denial made known to the applicant upon request.	• Licensing criteria are incomplete and vague - no timelines for licensing decisions. • Terms and conditions of individual licenses are not made public.	• Further development of the licensing criteria in Vietnam's regulatory framework for telecom would be appropriate.
• Independent regulators	• The regulatory body is separate from, and not accountable to, any supplier of basic telecom services. • Decisions and procedures used by regulators shall be impartial with respect to all market participants.	• Non-compliant, as the relationship between MPT and VNPT continues to be close. • Substantial rotation of personnel among the two agencies. • Responsibilities overlap, e.g., head of MPT is also on VNPT board.	• Independent regulatory body. • Privatization of VNPT.
• Allocation and use of scarce resources	• Any procedures for the allocation and use of scarce resources will be carried out in an objective, timely, transparent and non-discriminatory manner. • Current state of allocated frequency bands will be made publicly available, but detailed identification of frequencies allocated for specific government uses are not required.	• Since MPT's plans for these resources have not yet been released, it is unclear whether the other three criteria (objective, timely and transparent) will be observed.	

MARKET STRUCTURE AND OWNERSHIP

Competition in Vietnam's telecom sector has increased substantially since 1993 when there was an absolute monopoly on all segments of the industry. Despite these changes, however, the telecom structure remains dominated by the state-owned VNPT. According to the World Bank, the VNPT retains approximately 94% of the aggregate market, including operations in all telecom segments: equipment, engineering, construction and consulting. The company also retains non-telco assets in the tourism, printing and insurance sectors. Other carriers have entered the market, but overall Vietnam lacks a truly competitive environment.

Facility-based operators

Vietnam has six FBOs that provide services based on their own network infrastructure. Each of these operators is primarily state-owned and, except for VNPT, are geographically focused or service specific. The following summarizes ownership and services of Vietnam's six FBO operators:

- Vietnam Post and Telecommunications (VNPT):
  - Dominant state-owned operator with operations in all telecom segments, except for marine-based services.
  - Complicated organizational structure including 61 provincial and local PTTs, joint stock companies, joint venture companies, and other wholly-owned subsidiaries.
  - Owns 18% of second-largest operator in Ho Chi Minh City.
  - Owns and operates nearly 100% of total 5.4 million lines in service.
  - Established VPN and WiFi in 2003.
  - Retains approximately 94% of the overall telecom market.
- Vietnam Military Telecom Company (Viettel):
  - 100% owned by the Vietnamese military.
  - Received license in 1995 and provides fixed local, domestic long distance (DLD), International long distance (ILD), leased line, mobile and internet services.
  - Operates trunk radio network in Hanoi.
  - Operates IXP and offers retail access, e.g., ISP.
  - Network largely based on IP protocols, and beta testing VoIP services.
  - Commenced mobile service in October 2004.
- Saigon Postal and Telecommunications (SPT):
  - Established in 1995 as a joint-stock company.
  - Founding shareholders are state-owned enterprises, including 18% ownership by VNPT.
  - Provides fixed local (Ho Chi Minh City only), DLD, ILD, mobile and VOIP services.
  - Operates mobile joint venture with a Korean consortium using CDMA technology.
  - Operates around 40,000 land lines in Saigon as of June 2004.
  - Retains approximately 3% of the overall telecom market.
- Vietnam Electricity Corporation (ETC):
  - 100% owned by government-owned electricity monopoly.
  - Provides fixed local, DLD, ILD, leased line, mobile and VOIP services.
  - Actively developing network infrastructure and fixed leased lines services.
  - Preparing launch of VOIP and CDMA mobile services.
- Hanoi Telecom (HT):
  - Only operator with private investment, albeit limited.
  - Joint stock company established by: High-tech and Telecom Union (56.25%) Hanoi Electronics (25%), Hanoi High-tech Development Joint Stock Company (6.25%), and Hanel Plastics Joint-Stock Company (12.5%).
  - Provides fixed local (Hanoi only), DLD, ILD, mobile, internet and VOIP services.

- Vietnam Shipping Telecommunication Company (VISHIPEL):
  - 100% owned by the General Corporation for Marine Transport.
  - Provides marine (Inmarsat) services and radio communication services for ships at seas.

The telecom segments service by the six FBOs are summarized in Figure 8, along with an assessment of the segment's level of competition.

It is important to note that the VNPT is not a cohesive company in line with western private sector standards. Rather the VNPT is a collection of regional and provisional PTTs, SOEs, joint ventures and ancillary businesses. A recent government decision (No. 58/2005/QD-TTg) intends to restructure VNPT into a parent-subsidiary consortium comprising of a management board to manage the parent and the creation of separate post and telecom subsidiaries. Internationally, the corporatization process is viewed as a prerequisite to privatization as it requires the PTT to operate using international norms of governance, finance and accountability. The revamp, anticipated to begin in the fourth quarter of 2005, represents an important first step in reorganizing VNPT. Figure 9 highlights the complexity of VNPT's current organizational structure.

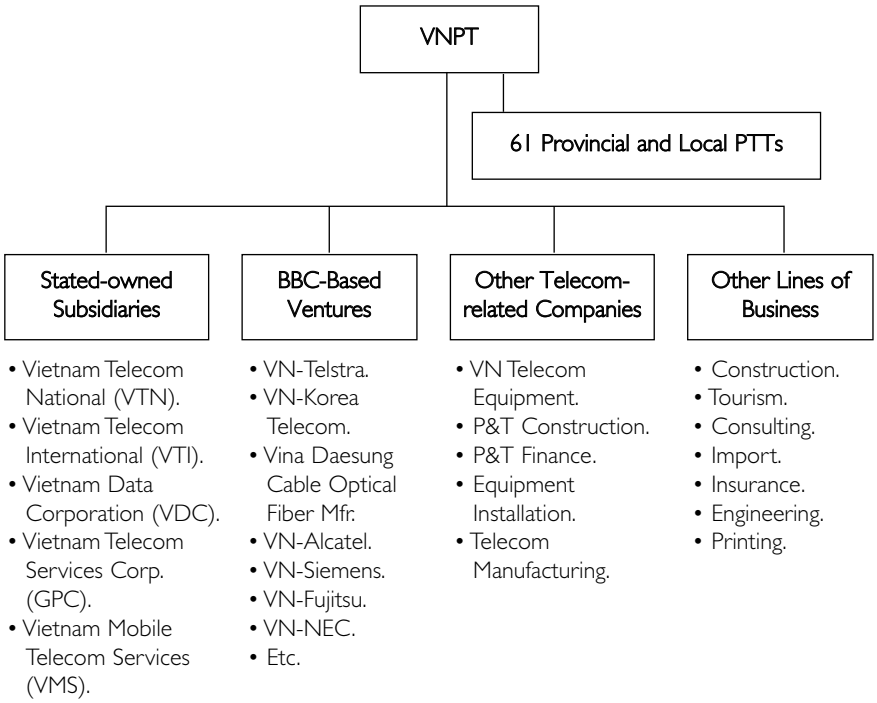
Figure 8: Competition among Vietnam's FBOs

Segment	Competition	VNPT	Viettel	SPT (Saigon)	ETC	HT (Hanoi)	VISHIPEL (Marine)
Local	Limited • VNPT Dominance. • Geographic competition.	✓	✓	✓	✓	✓	
DLD	Limited • VNPT Dominance. • Geographic competition.	✓	✓	✓	✓	✓	
ILD	Limited • VNPT Dominance. • Geographic competition. • Competition via VOIP.	✓	✓	✓	✓	✓	✓
Mobile	Competitive • JVs w/ foreign operators.	✓	✓	✓		✓	
Leased Lines	Limited • VNPT Dominance. • Geographic competition.	✓	✓		✓		
Internet	Competitive • Limited bandwidth. • SBO operators.	✓	✓	✓		✓	

Competition status in the mobile service market

The state of competition in the mobile service market is more robust than that of fixed line markets. In Vietnam, six licenses have been awarded in an increasingly competitive market. While there remains cross ownership, e.g., VNPT owns Vinaphone and partly owns Mobifone, competition has resulted in a rapid increase in subscribers. According to a recent government study, there are some 5.5M mobile phone subscribers. The high level of competition, which includes several foreign investors, has resulted in price decrees. One carrier, S-phone, recently cut connection fees by 50% and reduced its subscription fees. The network operators use three competing technology standards: GSM, CDMA and Personal Handy-phone System (PHS). Figure 10 outlines the

Figure 9: VNPT organizational structure



Source: VNPT website, World Bank, VNCI interviews.

Figure 10: Competition in Vietnam's mobile segment

Company	Owner	Investment	Technology	Subscribers	Operational
Vinaphone	VNPT	US$130M	GSM	3.0M	1996
MobiFone	VNPT Comvik	US$456M	GSM	2.5M	1998
Viettel	Viettel JV	n/a	GSM	250K	2004
S-Phone	SPT SLD Telecom	US$230M	CDMA	200K	2003
Cityphone	VNPT	n/a	PHS	n/a	n/a
VP Telecom	VPT	US$630M	CDMA	n/a	2Q 05
HT	HT Hutchison	US$656M	CDMA	n/a	4Q 05

Source: Saigon Times.

competitive makeup of Vietnam's mobile market.

Service based operators: Internet Service Providers

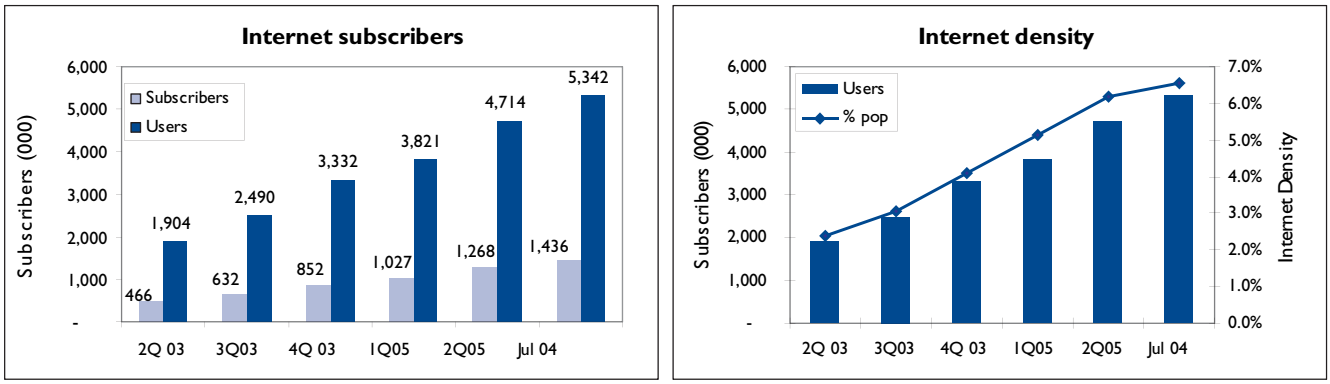
In addition to these six FBO licensees, over a dozen other companies have been granted licenses for value-added services, mostly ISPs. Of the 13 companies licensed, few provide service. Among independent ISPs, FPT Communications and Netnam are active. FPT Communications is backed by the large FPT group of companies, while Netnam pioneered the introduction of e-mail and Internet in Vietnam. Both companies have a large number of faithful customers.

According to MPT statistics, Internet usage has grown substantially in recent years. The most recent figures for July 2004 show a market growing nearly 70% in terms of new subscriptions, reaching nearly 1.5 million accounts. In the early stages of Internet development, it is common for multiple users to utilize a single account, e.g., universities or businesses. Taking this factor into account, Vietnam had more than 5M Internet users at the end of July 2004. Broadband Internet access in Vietnam is not widely available. Figure 11 outlines the rapid expansion from 2003 to mid-2004.

Another proxy for usage and growth of the Internet sector is the registration of IP addresses and domain names. According to the Vietnam Internet Information Center, an MPT unit, the volume of IP addresses increased by more than 220%, from 134K in September 2003 to 433K in June 2005. Domain name registrations have increased less dramatically: 7%, from 4,300 to 4,600 over the same period. Of these domain names, .com.vn represents 82%, followed by .org.vn (5%), .edu.vn (5%), .gov.vn (3%), Loai.Khac (3%), and .net.vn (2%). This breakdown indicates the general use of local websites.

The Vietnamese Internet sector remains dominated by FBO license holders and, like most segments, VNPT is the dominant player with a 57% market share. While VNPT

Figure 11: Internet subscribers and density in Vietnam



lost some of its market share in March 2003 (from 65% to 57%), these gains accrued to other SOEs rather than independent ISPs, whose combined market share remains nearly the same. Internationally, independent ISPs lose ground as traditional telcos initiate Internet services, bundle dial-ups with landline services or broadband services such as DSL. Cable TV operators also gain a market share when they introduce broadband products. Future innovations such as mobile Internet access provide integrated carriers with additional leverage over dial-up ISPs. The breakout of Vietnam's ISP from March 2003 to June 2004 is reflected in Figure 12.

One of the constraints to Vietnam's Internet market (aside from simple access to landlines) is international connectivity. As of July 2004, the entire country had only 1038 Mbps of connectivity, and VNPT controlled nearly 90% of the lines. In terms of destination points for this connectivity, Hong Kong and Singapore accounted for 68% of Vietnam's international access. Figure 13 provides details of carrier bandwidth and connectivity points.

Information Technology Enabled Services (ITES)

The government of Vietnam strongly supports the development of the country's IT industry. The reform of the telecom sector will fundamentally impact on the success of the government's policy. An important aspect of its IT policy is to nurture Vietnam's ITES sector. Like Internet access, ITES companies rely on the underlying telecom infrastructure to conduct day-to-day business activities. Since Vietnam has stressed the development of this telecom-

Figure 12: ISP market share, March 2003 – June 2004

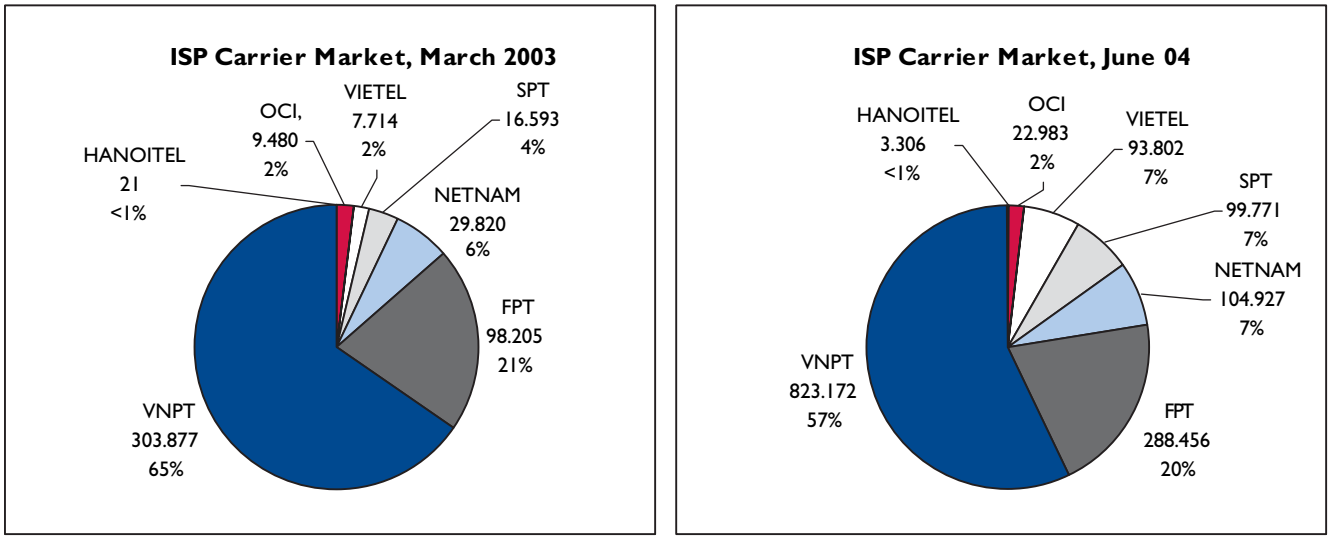
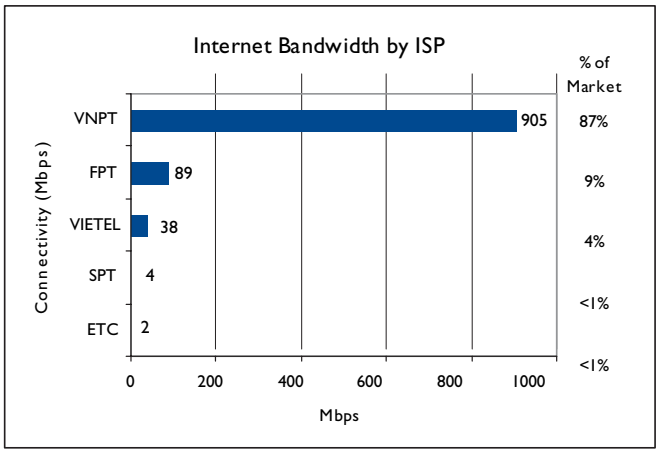
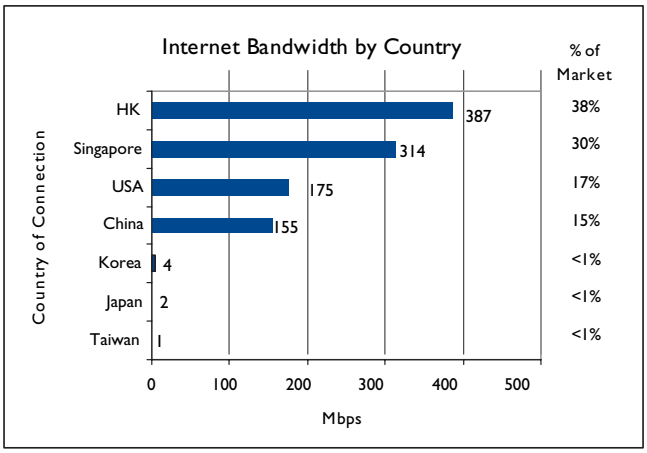


Figure 13: Vietnam internet connectivity





dependant sector, the following overview provides a perspective to understand this emerging industry. Sometimes referred to as IT-related, remote services or business process outsourcing (BPO), ITES refers to services which:

- provide data entry, data conversion, information/data development, processing and response;
- use IT in providing and/or transmission of the service;
- do not require any software programming expertise and, in most instances, do not require any particular education discipline other than on-the-job training for service providers; and
- are sourced off-site from the end user, i.e. are 'outsourced'.

Common ITES activities include:

- transcription;
- billing and collection;
- customer interaction centers;
- claims processing;
- content development;
- engineering support;
- administrative services;
- geographic information systems;
- human resource services;
- financial and accounting services;
- litigation and legal support services; and
- purchasing support.

Figure 14: Comparison of Vietnam to regional ITES players

Parameter	Vietnam	India	China	Malaysia
Industry Size (US$M, 2000)	n/a	6,200	>1,000	n/a
IT employee cost (US$ per year)	7,200	5,880	8,900	7,2000
Number of CMM Level 5 Certifications[7]	0	48	0	0
Positives	• Strong Government support	• English • Quality • Project mgmt • New services • Strong diaspora	• Large pool of IT grads trained abroad	• Strong Government support
Negatives	• Poor infrastructure	• Ordinary infrastructure • Political risk	• Language skills • Project Mgmt	• Absence of large pool of programmers

Source: IDC.

In 2001, IDC estimated the global ITES industry to be worth US$7.1 billion. With anticipated growth through 2006 of 11% CAGR, the ITES industry is poised to increase to US$1.2 trillion. At present, the ITES market leaders are Ireland, India, Israel, Canada, the Philippines and South Africa. However, Vietnam is viewed as one of several dozen

7. Capability Maturity Model, a quality certification based on the audited requirements of the Carnegie Melon University.

Figure 15: Permitted form of foreign investment in telecom by foreign parties

Category	Commitment
Value-added services including email, voice-mail, electronic data interchange (EDI), value-added facsimile services, code and protocol conversion and on-line information and data processing.	• Dec 2003 for JVs with maximum 50% U.S. capital contribution. • Dec 2004 for Internet services for JVs with maximum 50% U.S. capital contribution.
Basic telecom services including packet-switch, circuit switch, telex, telegraph, facsimile, private leased circuit, radio-based services including cellular, mobile, satellite.	• Dec 2005 for JVs with maximum 49% U.S. capital contribution.
Voice telephone services including local, long-distance and international.	• Dec 2007 for JVs with maximum 49% U.S. capital contribution.

second-tier destinations, and strong government policy and action could improve the country's prospect vis-à-vis strong international competitors. Figure 14 highlights Vietnam's position compared to leading ITES providers in the region.

Private and foreign investment

When it comes to private and foreign investment in the telecommunications sector, Vietnam has a restrictive investment climate. While the country's Law on Foreign Investment permits both joint ventures and 100% foreign-owned enterprises[8], neither are applicable to the telecommunications sector. Private domestic investment is permitted, but foreign investors can only invest through a BCC. The BCC model of investment is considered less desirable than other forms by foreign investors for a variety of reasons that will be discussed in this section. In addition, assuming that joint ventures will someday be allowed in the telecom sector, there is an open question as to if/how current BCCs can be converted to joint ventures when that form becomes available. What is apparent, based on international treaties and recent policy announcements, is that Vietnam is moving to open the telecom sector to more private investment.

The BTA requires that Vietnam open its telecom sector to United States investment, although the treaty gives Vietnam time to implement this change. It is important to note that Vietnam is behind schedule in implementing the BTA. Vietnam's commitments on market opening in telecom services are set forth in three categories, with a schedule that allows for the ability to form a joint venture with certain equity shares for trade involving a commercial presence in Vietnam. Figure 15 shows Vietnam's commitments in each of these categories.

According to the Foreign Investment Law and related regulations – especially Government Decree No. 27/2003/ND-CP – the BCC is the only form of foreign direct investment in telecom services. In the past, BCCs have made a significant contribution to the development of the telecom sector in Vietnam, notably at important junctures, notably the development of international transmission lines, introduction of the first mobile phone system, introduction of the first CDMA mobile system, etc. BCCs have also enabled some of the leading international telecom companies to enter into Vietnam markets, and make a foothold in those markets.

However, the BCC model of investment has some obvious drawbacks and limitations as discussed below, such as restricting equity participation and management control. This in turn has made foreign investors less comfortable, and the lack of flexibility negatively impacts on market efficiency. The limitations of the BCC as a mechanism governing foreign investment will likely inhibit incentives to future foreign investment, when large capital outlays are required for the next generation of technology and services. This chapter will present the main constraints of the BCC forms of investment, the benefits of alternative investment forms, and make initial recommendations to create a more favorable and

8. The restriction is found in the so-called 'conditional list' attached to the implementing regulations for the Law on Foreign Investment, Decree 27/2003/ND-CP amending Decree 24/2000/ND-CP on the Detailed Implementing Regulations for the Law on Foreign Investment (March 19, 2003).

liberalized environment for foreign telecom companies to operate in Vietnam.

Rationale for BCCs

A BCC is a form of investment in which a Vietnamese and a foreign partner agree to carry on an investment activity without creating a new company. The obligations and the rights of the two sides are set out in a contract. One or both parties may contribute fixed or working capital but the division of profits will be what is agreed upon rather than being in the same proportion as the capital contributions. In the case of a telecom BCC, the Vietnamese party will usually contribute access to the networks and some working capital while the foreign partner contributes money for new fixed capital that becomes the property of the Vietnamese partner at the end of the project. Management control of the network remains with the Vietnamese party.

In the past, BCCs as a form of foreign investment created some important advantages for managers of the telecom sector in Vietnam. These contracts helped to address security and sovereignty concerns, which were essential considerations for the government. In addition, the telecom industry in the 1980s and until late 1990s was fully monopolized by the state-owned VNPT, which wanted to exert its influence on the denial of any investment which would weaken its management control. VNPT management and many government officials perceived that Vietnam in general, and the telecom sector in particular, needed to have capital and technology only and that everything pertaining to an investment could be conducted by the government. Management and operational expertise did not figure high in the minds of those officials and business leaders. So government officials opted for the BCC model in order to:

- attract investment capital required for network development and modernization;
- bring expertise and new technology, e.g., CDMA, card-phone technology;
- acquire management expertise and business practices; and
- train human resources.

For foreign investors, there was no other option at the time. However, it was acceptable to some extent, because a BCC ensured an adequate internal rate of return (IRR) on their investment while the Vietnamese partner, VNPT, enjoyed a dominant monopoly position with little likelihood of newcomers emerging to compete for cash-flows. Foreign companies hence had to take it or leave it. Despite the positive achievements of BCCs for Vietnam generally, and their financial success for both the domestic and the foreign parties, there are many limitations inherent in the BCC form. The most notable ones for foreign investors are:

- **Structural limitations:**
  - No clear legal entity limits ability to mortgage assets or tab capital markets.
  - Strict limit of scope for BCC, e.g., one market segment or geographic location.
- **Management limitations:**
  - Limited management control and responsibility in operation and services.
  - Difficulty in focusing on the customer as few resources earmarked for marketing.
  - Transfer of skills lower than what might be with equity participation.
- **Financial limitations:**
  - Foreign investor will receive no long-term asset value from their investment.
  - High transaction costs due to separate management approval processes of the partners.
  - Focus on short term investment for quick return, with no long term incentives for investors to invest in modern technology or reinvestment over the life of the project.
  - The short duration can limit the time available to recoup the investment.
  - High rate of depreciation drives cost of service higher.

Vietnam current has numerous operating BCCs focused on international telecom networks, a mobile system and a local network with many types of services, from basic to value added. Each contract is different in scope and detail. Nine of these BCCs are entered into with VNPT, and only one of the BCCs is signed with a non-VNPT company. Figure 16 outlines present and past BCCs and provides key deal and contract information.

Figure 16:Vietnam's BCCS

#	BCC Partners (Source of Foreign Investment)	Year	Term (Years)	Foreign Investment	Scope	Notes
1.	VNPTTelstra Australia (Australia)	1998C	6	US$237M	Development of international telecom network and services	• Original BCC signed 1988 • Three contract extensions
2.	VNPTComvik (Sweden)	1995	10	US$127.8M	Development of the nationwide mobile phone network and services	• Constructed first GSM network • Recently terminated
3.	VNPTVoice International (Australia)		9	US$ 725K	Development and exploitation of paging services in HCMC	• Contract extended from 5 to 9 years
4.	VNPTSapura SDN-BHD (Malaysia)	1993	8	US$3.8M	Development and exploitation of the public card phone services in HCM area	• VNPT contributed US$1.6M
5.	VNPTWorldcorp Holding (Singapore)	1995	5	US$842K	Development and exploitation of yellow page services	• VNPT contributed US$2.3M
6.	VNPTKorea Telecom (South Korea)	1996	10	US$40M	Development of network in Hai Phong city and Hai Duong, Hung Yen and Quang Ninh provinces	• BCC signed 2 years earlier
7.	VNPTNippon Telegraph and Telephone (Japan)	1997	15	US$40M	Development of network in the Northeast of Hanoi area. Construction of 240,000 new telephone lines	• Project IRR estimated at 12-24%, with a 47/53 (NTT/VNPT) profit share • Realized on 50% of planned expansion
8.	VNPTFrance Telecom (France)	1997	15	US$467M	Development of internal network of the east of HCMC. Construction of 540,000 new telephone lines	
9.	VNPTCable & Wireless (UK)	1997	15	US$207M	Development of telephone network in the east of Hanoi city. Construction of 250,000 new telephone lines	
10.	SPTS-Telecom (South Korea)	2003	n/a	US$230	Development and exploitation of CDMA mobile phone network and service	• First non-VNPT BCC • Has clause to convert into joint venture when Vietnam law permits
11.	Hanoi Telecom Hutchinson Telecom (HK)	2005	15	US$656M	Build a CDMA mobile phone network in Hanoi	

Source: VNPT website, World Bank, VNCI research.

Evaluating BCC performance

BCCs in Vietnam have had mixed success. The BCC between VNPT and Telstra was the first in Vietnam. It has been satisfactory for both sides, because the need for international lines in Vietnam at that time was huge and, due to the high tariff imposed on international calls by VNPT, the income for Telstra was positive.

Later on, another BCC between VNPT with Comvik International

was workable, as it brought into place the first mobile phone network in Vietnam. Similar to international calls, the mobile phone tariff had also been set high by VNPT and the government of Vietnam, and therefore Comvik's income from the BCC was considered to be acceptable. In both of these BCCs, VNPT benefited considerably from both the capital and technological contribution of the foreign partners. Recently the VNPT decided against renewing its BCC with Comvik, which may increase the risk, and hence cost, of future BCC deals.

The fate of other BCCs with VNPT in the less lucrative area of local fixed telephone networks has been less satisfactory. The existing BCCs are those with NTT (Japan) for the Hanoi area, French Telecom for HCMC area, and KT (Korea) for Hai Phong, Quang Ninh, Hai Duong and Hung Yen areas. Capital investments made by foreign partners in those BCCs have been substantial and were therefore accordingly acknowledged by the Vietnamese side. However, the technology and know-how contribution of the foreign partners were not highly acknowledged by some local telecom officials, claiming that Vietnam had already mastered the technology for local telephone networks. More importantly, as the tariff for local calls was set fairly low by VNPT and the government, the income stream for investors has not been satisfactory. There is a lot of tension between VNPT's foreign partners about the IRR level applied when business plans are prepared each year.

Many managers of foreign investors involved with these BCCs believe that substantial change in the form of investment should be introduced if Vietnam wants to obtain a qualitative investment in the sector in the future. According to a former manager of Telstra, a new form of investment is needed because the prevailing BCC system does not accord with global trends. According to Comvik International, the BCC with VNPT is successful but the overall financial performance has not met Comvik's expectations because of weaknesses in the BCC system and taxation changes. Similarly, a Korea Telecom manager said: "Our experience and achievement has us wanting to make additional investments but in a climate more favorable to FDI enterprises. The BCC system is not suitable to commercial sectors –such as the Internet – which are developing very rapidly and need market competitiveness. To encourage the development of these sectors, foreign enterprises should be allowed to share corporate ownership and to participate directly in the operation of the business." These comments explain to a certain extent recent news about VNPT's plan to raise capital for its mobile operations via a public offering rather than an extension of its BCC.

In the future, the capital cost for investment in telecom projects will likely be greater but the expected margins will be lower due to more competition. Thus, if the BCC form continues to be used, it is likely that Vietnam will only be able to attract low quality investors. A better alternative would be for Vietnam to expand the types of foreign investment allowed to United States investors according to the requirements of the BTA.

Vietnam agreed in its BTA with the United States on a timetable for permitting joint ventures with U.S. investments in the telecom sector. It is likely that a similar commitment will be made to other countries in the course of Vietnam's accession to the WTO. Some countries may already enjoy the benefit of the same timetable because of most favored nation (MFN) clauses in their trade and/or investment treaties with Vietnam. In any case it seems likely that the Vietnamese Government will eventually publish regulations that will permit investors from all countries to enter JVs in telecom on a timetable similar to that permitted for U.S. investors. When combined with the recent termination of its cellular BCC with Comvik, it appears government policy, market forces and financial pressure is pushing Vietnamese companies toward more common forms of joint ventures.

Regional comparisons of foreign investment

The degree of liberalization of the traditional fixed-line voice service sub-market is commonly used as a litmus test of whether the overall market is open to competition. In terms of the number of suppliers, monopoly or duopoly structures still dominate ASEAN fixed-line

voice services markets. Only the Philippines, Malaysia and Vietnam have a competitive market structure (as defined as having more than three operators competing with the incumbent PTOs). However, unlike most other ASEAN countries, Vietnam restricts equity participation by foreign investors, as outlined in Figure 17.

Figure 17: Regional comparison of limits on foreign ownership

Countries	% of foreign capital allowed	Legal forms required
Brunei Darussalam	Not allowed	n.a.
Cambodia	49 (with exception)	None
Indonesia	Non-ASEAN: 35 ASEAN: 40 (with exception)	JV, JO, CM
Lao PDR	Foreign equity not less than 30 for JV	JV or foreign-owned company
Malaysia	61 allowed for the first 5 years; 49 subsequently	Through acquisition of shares existing operators
Myanmar	Not allowed	Not allowed
The Philippines	40	No restriction
Singapore	100	No restriction
Thailand	20	JV
Vietnam	Not allowed	Only through BCC

THE DOMINANT ROLE OF VNPT

The introduction of competition into the telecommunications sector is a relatively new phenomenon, largely driven by the breakup of AT&T in the USA in 1984. Previously, telecommunications was viewed as a utility or 'natural monopoly'. In many countries, both developed and developing, this monopoly was state-owned. During the 1980s and 1990s, however, the landscape changed significantly as country after country adopted a new model based on private sector ownership and competition. In almost all countries, the mobile sector became a driver for competition, not only with other mobile operators, but with landline operators as well. These new networks also required large sums of capitol, ushering in a wave of new operators, joint ventures and other new business models dependant on private sector investment.

Policy-makers and regulatory measures quickly released the natural advantage that incumbent operators had to impact on the market and inhibit competition. When the incumbent is state-owned, there is a potential bias, both perceived and real. After all, one branch of government overseeing another may create problems and, in many cases, there was a history of shared responsibility and overlapping personnel. When the operator was private or privatized, the company maintained a dominant position, in terms of network infrastructure and market share, which in turn allowed the company to participate in anti-competitive activities. In response, the international community developed the GATS Annex on Telecom and the Reference Paper to provide minimum standards to prevent a former operator creating a monopoly, and any new entrants who achieve large market shares from using their positions to engage in anti-competitive practices. In principle, Vietnam has agreed to these standards.

VNPT's dominant position in Vietnam's telecom sector is unquestionable, with the World Bank estimating that the company holds 94% of the aggregate market – well above the 30% threshold outlined by the MPT. This continuing control of essential facilities and its overwhelming share of multiple segments have led to questions about whether the VNPT is inhibiting competition and, hence, impacting on network expansion, service quality and the introduction of advanced services. The historical relationship between the MPT and the VNPT adds to the debate for the need for a fundamental restructuring of VNPT and the establishment of a powerful, independent regulator.

Such questioning has been accompanied by allegations from other service suppliers of anti-competitive practices by VNPT. It is beyond the scope of this report to investigate these allegations. However, it serves the purpose of focusing attention on the need to review the position of VNPT in making an assessment of competition in the telecom sector and the impact of the type and level of competition on the sector's future development. Many of the complaints against VNPT have been investigated and settled by MPT. However, there are indications that some of these practices are continuing. The particular allegations made about anti-competitive practices by VNPT include:

- unfair allocation of network facilities;
- high prices for use of network facilities;
- cross-subsidization;
- refusal of services; and
- forced use of VNPT services; and
- abuse of technical measures to block competitors' services.

Anti-competitive behavior

Unfair allocation of network facilities

Due to its incumbent status, the VNPT owns most of Vietnam's telecommunications network, and is the only operator with widespread geographic coverage. Given this situation, competitive operators must interconnect with VNPT to offer a variety of services used for long haul traffic (also known as

backbone or trunk services) and local access, not to mention access to VNPT's subsidiary networks in the mobile, data and Internet spaces. According to industry experts, VNPT frequently cites the lack of network capacity as the reason for denying interconnection for new telecom companies, or for meeting only small parts of their requests. In practice, these actions stifle competition, and in turn inhibit the development of the sector.

Viettel's experience provides an example. In accordance with the interconnection agreement between the two parties, Viettel submitted a request for interconnection three months in advance so that VNPT could prepare plans for investing and upgrading its network. On 30 October 2002, Viettel submitted an official dispatch to VNPT to give notice of its plan to open VoIP networks in 21 provinces and to request increased interconnection capacity for 17 provinces in 2003. However, the result was that VNPT only agreed to allow Viettel to open the network in nine provinces. It is one thing if the VNPT truly does not have network capacity. However, there are indications that the VNPT has sufficient capacity for its own operations while rationing the same access to its competitors.

High prices for use of network facilities

VNPT has been alleged to charge unreasonable prices for use of its network facilities, and due to its dominant position in the marketplace, competitors have no option but to purchase these overpriced services. One glaring example involves the schedule of charges for leased lines to companies outside VNPT. One company has to lease international lines from VTI, a VNPT subsidiary, at a price four times higher than the level at which VTI leases the lines from foreign companies. Similarly, another company has also complained that the charge by VNPT on its leased lines accounts for 79.9% of the lease line fee, and is four times higher than the levels of other countries in the region[9]. Since the new entrants cannot lease international fiber optic cable, the dominant carrier, VNPT, extracts a 300% margin from its competitors.

Cross-subsidization

Cross subsidies take excess profit from one service, e.g., international leased lines, to provide another service, e.g., local service, at levels below cost. When a competitor is paying for a service that is overpriced, e.g., international leased lines, that company and its users are subsidizing users of the below cost service, e.g., local service. This practice expressly contradicts government regulations, outlined in Decision 217/2003/QD-TTG where the 'interconnection fee of telecom companies is determined...without differentiation between telecom companies and between members of telecom companies with other telecom companies'. That means that all telecom companies should have to pay the interconnection fees stipulated by MPT.

However, VNPT is not able to accurately calculate cost-based interconnection because the company does not have a separate accounting system or adequate financial processes for several subsidiaries involved in cross-subsidization. For example, VNPT's mobile and Internet subsidiaries lack an independent cost accounting and do not pay VNPT interconnection fees. These practices distort the market and allow the dominant carrier to have a significant competitive advantage.

Refusal of services

There have been many cases reported of VNPT refusing to provide services to market competitors, notably Viettel and SPT. According to the regulations, the dominant operator must provide every available service in its network to customers of the interconnecting new operators. In one example, VNPT temporarily refused to provide value-added services, toll free (800 services) and paid toll (900 services) to Viettel's subscribers. There are other instances where VNPT refused to provide competitors with certain licensed directory services.

Forced use of VNPT services

Using the power of the dominant service provider and network infrastructure operator, there are cases where VNPT subsidiaries forced distributors to sell only VNPT services. One typical example is provided by NetSoft, an ICT company operating under the auspices of the Ho Chi Minh City PTT. The memorandum states that

9. 'Phong Lan Enterprises are in big trouble because of high leased line fees', VnExpress, 31 March, 2004.

'from 1 March 2002, NetSoft agents must commit to sales of pre-paid VNN Internet (such as VNN 1260-P, Fone VNN, etc) and commit to minimum sales of 400,000 VND/month, otherwise the agent's ADSL connection shall be cut off'. This decision is seen as unfair by many agents, particularly because the NetSoft commission fee is about 6% to 8%, lower than the 15% to 25% commissions offered by other ISPs. VNPT's master contract with agents also stipulates that 'NetSoft agents shall not act as agents for any Internet services providers other than VNN'[10]. Given VNPT's market dominance, these commercial arrangements are clearly anti-competitive.

Abuse of technical measures to block competitors' services

One of the most frequent complaints about VNPT is that its provincial subsidiaries, the provincial PTTs, use technical measures to drive VoIP traffic over to VNPT's network. The PTT engage in a practice called 'turn off the trunk side' to block telephone calls through the VOIP networks of Viettel and SPT. In such cases, customers can only make calls through VNPT's VoIP network[11].

There are also instances where a local PTT has punished large corporate clients that select VNPT competitors or refuse to purchase value added services. If the contract was refused, these companies had problems in making and receiving telephone calls, as well as in obtaining repair services from the local PTT[12].

Competition Law Issues

Many of the allegations just described against VNPT and the provincial PTT companies, if true, would amount to violations of the Law on Competition recently adopted by the National Assembly. One of the most important aspects of the new law is that it is written to apply to SOEs as well as private enterprises. The conduct of VNPT and the provincial PTTs, therefore, could be the subject of a competition case to be investigated by the competition enforcement agency that will be based at the Ministry of Trade. Such a case could be initiated either by a person or organization whose interests were harmed by the alleged competition law violation or by the Competition Administration Authority, a new agency to be established within the MOT. A finding that a violation of the Law on Competition did occur could lead to:

a) The imposition of one or more sanctions against the violator including monetary fines, revocation of permits and licenses and 'handling measures' that seek to cancel or unwind an illegal agreement or transaction; and

b) Payment of compensation for damages to an individual, organization or the State that is harmed by the violation[13].

The Competition Council, another agency to be established under the Law on Competition will decide whether a violation exists and on the penalty, and has considerable discretion regarding the remedy for the violation and any penalty. There is also the possibility of an appeal to higher administrative authorities and to the courts and, because the standard for review of the initial decision is set out clearly in the law, it seems that some exercise of discretion by these appeal agencies may be possible. The likelihood that VNPT or any of the provincial PTTs will be sanctioned for alleged misconduct, if proven, may depend on the Government's policy on competition and the degree of separation between VNPT (or the PTT involved) and the government authorities handling the appeal.

Most of the anti-competitive conduct that VNPT and the provincial PTT companies are alleged to have engaged in falls in the category of abuse of dominance, i.e. conduct that is possible because of those parties' dominant positions in the relevant markets. Six types of abuse of dominance are prohibited in the current draft law, and much of the conduct alleged appears to fall within one or more of the types of conduct that will be prohibited. Figure 18 reviews the alleged anti-

10. 'A competition going through a blind alley', Thanh Nien Online, 28 July, 2004.
11. Hoang Ly, 'Competition according to 'jungle' laws', Thanh Nien Online, 13 September, 2004.
12. After many similar occurrences, in June 2004, MPT arranged an investigation of Khanh Hoa provincial PTT, and made VNPT sign a memo with Viettel, committing not to take such actions again. However, in spite of the memo, it has been reported that such activities still occur, and in August 2004, the Ministry of Defence had a meeting with MPT, requesting MPT intervention to solve the problem completely.
13. Law on Competition, Arts. 116 and 117, states that the fine is limited to a maximum of 10% of the sales revenue of the violator for the financial year preceding the year in which that act is conducted.

Figure 18: Telecommunications issues addressed via the Law on Competition

Alleged conduct	Type of prohibited abuse of dominance
High prices of infrastructure services	Price squeeze: 2. Impose unreasonable purchase or sale prices for goods and services or fix the minimum re-sale prices, thus causing damage to customers.
Cross-subsidization	Predatory pricing, price discrimination: 1. Sell goods at prices below the cost price (including the production cost and circulation costs) in order to preclude competitors, except for special cases provided for by the Government. 4. Apply different commercial terms to different enterprises with respect to the same transactions, hence placing those enterprises in an unequal position in terms of competition.
Refusal of services	Refusal to deal: 6. Hinder market access by new competitors.
Unfair allocation of network facilities	Refusal to deal: 6. Hinder market access by new competitors.
Forced use of VNPT services	Tying: 5. Impose on another enterprise conditions for entering into a contract for the purchase or sale of goods or services, or compel another enterprise to accept obligations that are not directly relevant to the subject matter of the [concerned] contract.
Abuse of technical measures to block competitors services	Limiting markets, refusal to deal: 3. Restrict production [or] distribution, limit market[s], or hinder technical and technological development, thus causing damage to customers. 6. Hinder market access by new competitors.

competitive practices of VNPT and provincial PTTs and links to the abuse of dominance prohibited in Article 13 of the Law on Competition.

As the above discussion of possible applications of the Law on Competition to the telecommunications sector indicates, the standard competition law issues in the category of abuse of dominance can be expected to be important in the sector. As the telecommunications sector develops and attracts more companies of various competitive capacities, this importance will likely increase and the other categories of competition law, agreements for restriction of competition, mergers and acquisitions, and unfair competitive acts will become important as well. Because of the importance of competition law issues to the regulation of the sector, some countries assign the function of enforcing competition law in the sector to the independent telecommunications regulatory agency rather than (or in addition to) the general competition law agency. Vietnam's Law on Competition so far makes no such assignment, perhaps because, as yet, there is no separate regulatory body for telecommunications. However, the activity of the Competition Council in enforcing the Law on Competition for telecommunications could contribute to the design of a new regulatory agency for telecommunications that could be assigned to enforce some aspects of competition law in the sector in the future.

The argument for privatizing VNPT

There is a global consensus among opinion-leaders that privatization and competition provide economic and social benefits to society, particularly in the telecommunications sector. Sometimes called equitisation, capitalization or divestiture, the privatization consensus is apparent in many countries in Asia where governments are pressing to liberalize their economies and reform the public sector, with emphasis on structural reforms within the telecommunications sector. While regulatory reforms, privatization and the introduction of competition gain momentum worldwide, each country must pursue a strategy and pace of change most appropriate to its socio-economic and political situation. The overarching trend, however, is clear: the region's governments are executing ambitious initiatives to reform their telecommunications sectors and ultimately improve the economic

Figure 19: Asian privatizations in the 1990s

Year	Country	Company	% sold	Sale amount	Financial notes	Purchaser(s)
1999	India	VSNL	10.0	US$ 104 M	Public offering	Local/Foreign
1997	India	MTNL	8.5	US$ 359 M	Public offer	Various
1997	India	VSNL		US$ 448 M	Public offer	Foreign investor
1997	China	China Telecom HK	25.0	US$ 3,933 M	ADRs	Various
1997	Kazakhstan	Kazakhtelekom	40.0	US$ 370 M	Private sale	Foreign investor
1997	Russia	Svyazinvest	25.0	US$ 1,875 M	Private sale	Local investor
1997	Sri Lanka	Sri Lanka Telecom	35.0	US$ 225 M	Tender	Foreign investor
1991	Turkey	Turk Kablo	38.0	US$ 11 M	Direct sale	Foreign investor
Total				US$ 7,324 M		

Source: World Bank, VNCI research.

and social well-being of their populations. As decision-makers continue along the path of institutional capacity building, privatization or the licensing of new service providers, the liberalization process is likely to provide tremendous opportunity for the private sector to invest in telecommunications infrastructure as well as modernize and improve access to advanced telecommunications technology and information services.

VNPT's recent announcement of its intent to sell to the public a 49% share in its mobile subsidiary suggests that it is an appropriate time for Vietnam to discuss an overall policy on privatization. Recent history suggests this policy is in fact overdue. During 1996 alone, there were more than 110 telecom privatizations transactions in nearly 70 different countries. In 1997, there were an additional 17 privatization transactions, raising more than US$40 million. In 1998, Brazil privatized its state-owned operator, receiving an incredible US$19 billion in bids. Of all privatizations in 1997 and 1998, the telecommunications sector represented one-quarter of the transactions. More recently, India privatized in the late 1990s, raising nearly $1B through public offerings, and Pakistan is selling a 26% in PTCL worth around $750 million. Thailand intends to sell-off two telecom SOEs (and recently recreated an independent regulatory as a prelude). In fact, in recent years more than 50 governments have transferred ownership and control of state-owned telecommunications providers to the private sector, raising more than US$200 billion – a trend that is unlikely to ebb in the near future. Figure 19 provides an overview of recent privatizations in the region.

Internationally, the benefits of privatization are convincing. Statistical data from recent privatizations strongly suggests that the introduction of private sector capital and management results in network expansion, increased teledensity, higher levels of investment and the introduction of advanced technology. However, privatization in some countries has produced more benefits than in others. For example, in terms of the relationship of privatization and annual investment in the telecom sector, empirical data points out that annual investment increases in the post-privatization environment. In Mexico, annual investment nearly doubled in the second year following privatization, while in Peru, annual investment nearly tripled in the first year alone. In Malaysia, annual investment increased three-fold during the fourth year of post-privatization. In terms of raising teledensity and/or

increasing telecommunications access, similar discrepancies arise; privatization has a positive impact, but the relative benefit varies from country to country.

In addition to a rapid roll-out of the network, international experience suggests that privatization also results in increased revenues for the mainline operator, higher revenue per line and improved operational efficiency as measured by the number of employees per line. In simple terms, on average, privatizations worldwide have improved the efficiency of the mainline operator, and dramatically increased capital expenditure and teledensity.

By learning from these international experiences, Vietnam can develop privatization and liberalization plans that meets the country's overall needs. It is important to note that much of the technical, legal and business expertise within the telecom industry resides within the private sector; this planning process permits the government to tap into this information, experience and analysis. In this way, several competing interests may provide difference analyses, studies and recommendations. Privatization, albeit an important first step, should be seen however as only one of the initial policies of liberalization, and must ultimately be linked to regulatory reform and the introduction of competitive market forces.

RESULTS OF THE SURVEY OF TELECOM SERVICE USERS

This chapter draws upon the results of a survey of telecom users to outline a number of key demand side features of the Vietnamese telecom sector. As discussed below, there were 89 firms (from a total sample of 150) providing written responses to our mail-out survey focusing on the following key issues:

- The current state of utilization of telecom services by enterprise users.
- The quality of telecom services and products currently available in the market.
- The relationship between price and the amount and type of telecom services consumed.
- The likely behavior of telecom users if telecom services are substantially improved.

The sample

Figure 20 provides a breakdown of the sample by location, industry, ownership and size. The sample is not intended to be representative of all firms in Vietnam. However a number of key criteria were used in selecting firms to be surveyed:

- First, we focused on firms with telecom intensive inputs, such as ICT, banking and other services. Only 12% of the sample were from manufacturing.
- Second, in line with VNCI's focus on building the competitiveness of small to medium sized domestically owned private firms, we limited the number of state-owned and foreign invested firms to about one-third of the sample.
- Third, we tried to leverage as much as possible from the existing networks of the VNCI clusters. For this reason, we included 30 firms from the VNCI software/ICT Clusters in both Hanoi and HCMC, and 14 joint-

Figure 20: Breakdown of sample

By location		By industry		By ownership		By size (staff)	
Hanoi	72%	ICT	37%	Private	66%	less than 100	58%
HCMC	25%	Other services	36%	SOE	20%	100 to 300	20%
Other	3%	Manufacturing	15%	FDI	14%	300 to 500	11%
		Banking	12%			more than 500	11%
	100%		100%		100%		100%

Figure 21: Level of importance of telecom services and products

Service	All enterprises	IT	Banking	Services	Manufacturing
Fixed telephone	1.19	1.24	1.1	1.22	1.08
Internet access	1.48	1.4	1.67	1.5	1.5
Mobile telephone	1.52	1.64	1.78	1.45	1.23
ADSL Internet access	1.87	1.38	2	1.86	3.09
Dial-up Internet access	2.96	3.58	2.6	2.94	1.89
Leased line	3.39	3.59	2.75	3.2	3.78
Data transfer	3.44	3.93	2.22	3.05	4
VoIP	3.95	3.93	3.89	3.84	4.33
Frame relay	4.14	4.24	3.25	4.56	3.9
WiFi Internet access	4.15	3.95	4.71	4.31	4
1800 service	4.16	4.41	4.17	4.24	3.5

Where: 1 = very important/frequently used, 2 = important/generally used, 3 = normal importance and use, 4 = less important/less used, and 5 = not at all important/never used

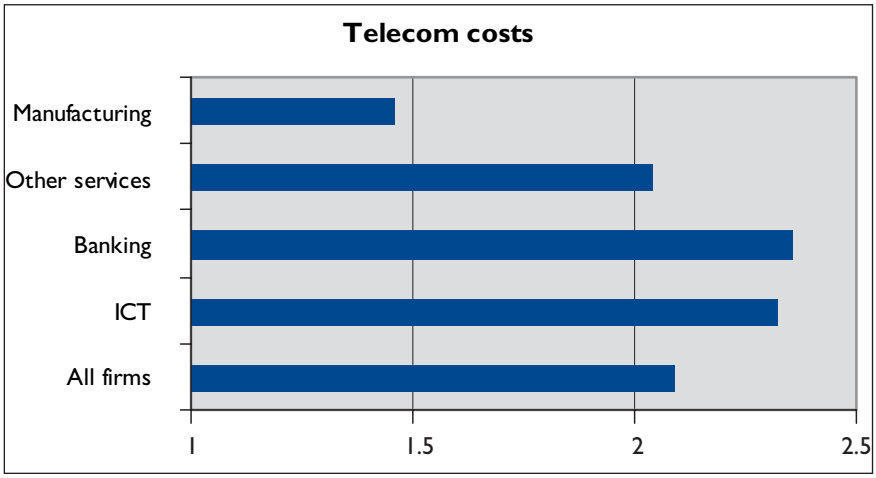
stock commercial banks associated with the banking component of VNCI.

Utilization of telecom services

As presented in Figure 21, various telecom services and products were ranked by level of importance to enterprise users. The overall result indicates a low level of utilization of telecom services in the surveyed enterprises, even those from the ICT sector. It appears that 'traditional' telecom services such as fixed line telephony, cellular telephony and Internet were the most important services across all sectors (in particular to manufacturers), with the least important/least used being the WiFi access, frame relay and toll free services.

The survey asked a follow up question: what was the primary reason for not using new telecom services/products? Respondents had the choice of one of three answers: 1) the service is not yet available; 2) there is no perceived commercial use of the service; and 3) the high price of the service. The overriding response was 2), suggesting a number of advanced features and services are not perceived to add value. This could be due to a lack of customer understanding and/or poor product education and marketing.

Figure 22: Telecom costs as a percentage of total costs



Note the averages in the above graph are drawn from the following aggregate responses:
1 = telecom costs / total costs are less than 5%;
2 = telecom costs / total costs are greater than 5% but less than 10%;
3 = telecom costs / total costs are greater than 10% but less than 15%; and,
4 = telecom costs / total costs are greater than 15%.

Figure 23: Assessing telecom service prices

	All enterprises	IT	Banking	Other service	Manufacturing
Fixed line telephone	2.06	2.19	2.25	1.82	2.33
International call	1.48	1.47	1.60	1.35	1.69
Provincial call	1.77	1.87	1.73	1.81	1.45
Local loop call	2.38	2.63	2.50	2.11	2.25
Cellular phone	1.62	1.71	1.91	1.48	1.46
Internet dial up access	1.98	2.05	1.70	2.08	2.00
ADSL access	2.37	2.29	2.00	2.39	2.89
WIFI	2.54	2.15	1.33	3.20	4.33
VOIP	2.84	2.62	3.00	2.77	4.00
Leased line	1.63	1.43	1.22	1.88	2.38
Data transfer	2.03	1.76	1.57	2.40	3.50

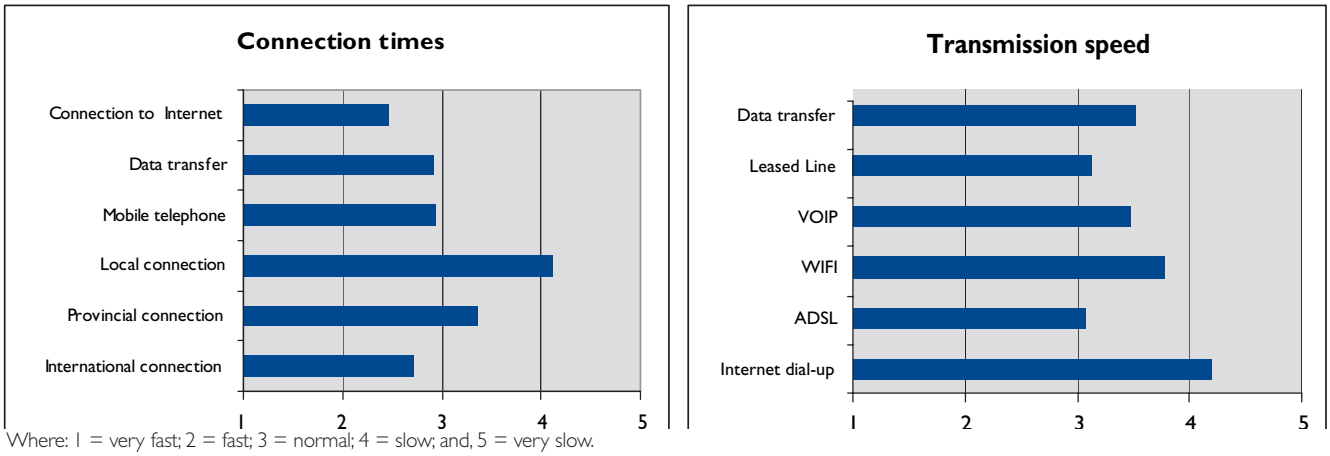
Where: 1 = too high; 2 = high; 3 = normal; and 4 = low.

Telecom costs

Telecom related services accounted for approximately 5% of the total operational expenses of surveyed enterprises in the survey sample. Enterprises in banking and the financial sector reported a higher telecom to total expense ratio of 5-10%, whilst for manufacturing this ratio was typically under 5%. The results are outlined in Figure 22.

Service price levels were very high according to the surveyed users.

Figure 24: Connection service quality measures



Where: 1 = very fast; 2 = fast; 3 = normal; 4 = slow; and, 5 = very slow.

This perception was strong for ILD, DLD, Internet dial-up services, cellular telephone calls and leased line services. Fixed line local telephone calls, ADSL and VoIP were perceived to be more reasonably priced. These findings were consistent across all industry groups, and are summarized in Figure 23.

Firms were also asked how they would respond to 10%, 20%, 30% and 40% reductions in service prices. We found that, to varying degrees, firms were sensitive to changes in telecom prices (that is, a reduction of telecom prices that would lead to a significant increase in the demand for telecom services). This is what economists refer to as 'price elastic'. The calculated price elasticity of demand ranged from -0.57 to -0.66, with an average for the entire sample of -0.63 (manufacturing having the lowest elasticity). This means that for every 10% reduction in price, demand for telecom services should expand by around 6%. In this way a price cut of about one third will lead to an expanded market for telecom by 25-30%.

Service quality assessment

Firms were also surveyed about their views on service quality based on four criteria: connection times, transmission speed, reliability of services (frequency of breakdown) and technology deployed. Average responses for connection times and transmission speeds are summarized in Figure 24.

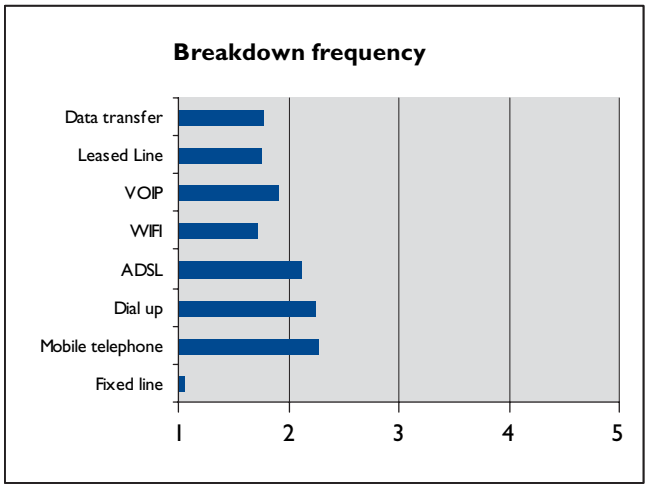
Most respondents report satisfactory connection times, with the possible exception of local connections. The overall assessment of transmission speed for the various telecom services is 'normal to slow'. Respondents perceived the Internet to be particularly slow. Responses on breakdown frequency suggests reliable network connections. As expected, the most problematic areas in terms of breakdowns are mobile, dialup and ADSL services, but even these only happen occasionally. Figure 25 outlines the survey results on breakdown frequency and technology used.

The general assessment of the level of technology used is that it is relatively new and up to date, although not state of the art. A preliminary assessment of the quality of telecom services, using the above figures, is essentially positive. Telecom users perceive that they have access to a relatively modern telecom system that provides reliable and fast connections, but with relatively low transmission speeds.

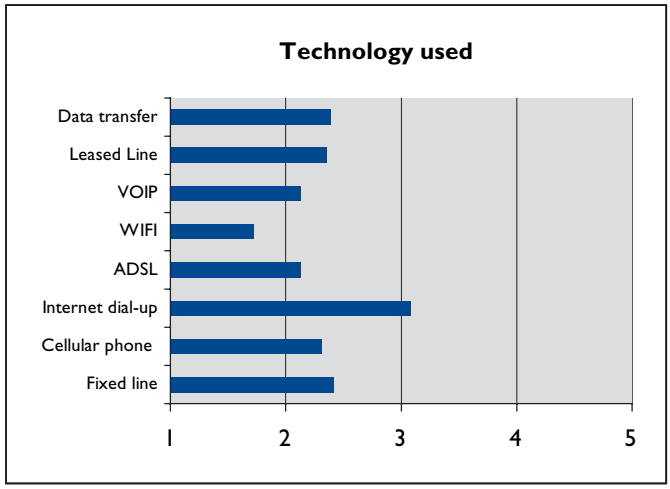
Impact assessment of improved services

Firms were asked what would be the likely impact upon their businesses if telecom services were substantially improved (i.e. delivered in best practice manner in terms of quality, price and services available). The results, as summarized in Figure 26, showed that there would be a significant increase in revenue, labor productivity, profitability and the rate of innovation. Unsurprisingly

Figure 25: Breakdown frequency and technology assessment



Where: 1 = never; 2 = sometimes; 3 = normal; 4 = often; and 5 = very often.



Where: 1 = cutting edge technology; 2 = relatively new; 3 = neutral; 4 = old; and 5 = very backward.

Figure 26: Impact of improved services on enterprises

	All enterprises	IT	Banking	Other service	Manufacturing
Increased turnover	6%	8.5%	6.5%	4%	5.5%
Increased labor productivity	7.5%	8.5%	6%	7%	7%
Cost reduction	4%	5%	4%	4%	4%
Increase in profits	6%	7.5%	6%	5%	4%
Increased technology innovation	7.5%	8.5%	8.5%	5.5%	6.5%

the strongest impacts would be in the IT and banking industries.

Conclusions of the survey

A number of interesting points can be drawn from this survey of business users:

- Vietnam appears to have a well-run and reliable telecom network that provides relatively fast connections, but often slow transmission speeds.
- Although new services are available, most firms continue to focus their telecom use on traditional telephony and Internet services, suggesting that important platforms for innovation are yet to be exploited.
- Most business concerns focus on the relatively high prices of Vietnam's telecom services. Price reductions would lead to substantial increase in demand for telecom services. A price reduction of one-third would likely lead to a 25-30% expansion of the telecom market.
- Improved service delivery (including lower prices) would translate into improved firm level competitiveness through significantly higher turnover and revenues, improved profitability and an increased rate of innovation.

THE WAY FORWARD

The path for Vietnam to move forward with its process to liberalize the telecommunications sector is straight-forward. Globally, there is a clear bias toward competition and regulatory transparency, including a primary role for private investment – both domestic and international. Vietnamese decision-makers understand this, and have agreed to meet a variety of criteria embedded in Vietnam's bilateral treaty with the United States, and by reference, international norms associated with GATS and WTO. First and foremost, Vietnam must move aggressively to institute transparency in its telecom strategy and regulatory policy. The country must also fundamentally revamp the VNPT through a series of reorganizations that will ultimately result in private sector investment. The government must also contend with other SOEs operating in the telecom space.

The importance of the liberalization process cannot be underestimated, as success or failure will influence Vietnam's ability to economically compete in regional and global markets. The inability to build out its network infrastructure, for example, directly impacts all export related business as well as the IT and ITES segments. Only with ubiquitous access, both urban and rural, to cutting edge technologies at competitive prices can Vietnam's Doi Moi policy succeed in bring prosperity to all segments of the population.

But change is rarely an easy process, and often requires long-term focus and commitments. Change also requires choices that negatively impact on powerful and vested interests. Therefore, building societal consensus is key to implementing and sustaining change. Indeed, even when consensus is reached, people and organizations have honest differences on how to achieve common goals. Therefore, public discussion and fact-based decision-making are primary in order to ensure success.

In this chapter, the VNCI proposes commonsense recommendations based on trends in both Vietnam as well as international norms. It is important to note that recommendations build on previous works conducted by the World Bank, GIPI, the Government of Vietnam and the VNCI. In order to build societal consensus around these recommendations, the VNCI puts forward best and worst practices from around the region and world, and ties these practices to various stakeholders in a vibrant, competitive telecommunications environment:

- Government – strategy, policy and regulation;
- Business – operators, vendors and related businesses;
- Consumers and Civil Society – business and residential users, unions, trade groups, et al.

Implementing change is a difficult, technical process, particularly if there is a lack of consensus among key decision-makers and stakeholders. Therefore it is important to understand the important role each of these groups has in the liberalization process, and learn from the best and worst practices around the world. Figure 27 highlights the role each stakeholder plays – government, business and civil society – and provides a framework for developing a consensus for action.

Recommendations

The VNCI has identified significant gaps between objectives laid out by the government of Vietnam and the realities of its telecom sector. Policy-makers have stressed that competition is a key objective for the government. While Vietnam has introduced some competition, it remains geographically isolated and service specific. In addition, all competitive players include state investment and/or cross ownership of the dominant player, VNPT. Modernizing and reforming the dominant VNPT is primary to the success of Vietnam's liberalization program. Other important features of competition include a cost-effectively handle mechanism to disputes in a timely manner. Based on Vietnam's new competition law,

Figure 27: Telecom's best and worst practices

Stakeholder	Role	Best practices	Worst practices	Innovations
Government	Policy-making.	• Multi-sector policy development, e.g., telecom, IT, trade and education.	• Conflicting policies among different ministries.	• Multinational policy[14].
	Regulation.	• Single, independent regulatory agency for convergence sectors, e.g., telecoms, IT, media. • Self financed. • Technology neutral standards • Robust data gathering and analysis.	• Separate regulators at national, state and municipal level, e.g., USA. • Technology/service favoritism. • Burdensome regulation	• Multinational regulation. • Self regulation and multi-sector competition' commission[15]. • Universal licensing[16]. • Use consultants to capture sector expertise.
	Jurisprudence (Judicial Review).	• Specialized court for telecom section with sector experience and expertise[17].	• Multiple legal forums for legal review. • Jurisdiction shopping.	• Required independent mechanism for binding arbitration or need for court action.
Business	Operators.	• Access to private/foreign investment. • Converged service providers. • Transparent governance to prevent improper accounting, and anti-competitive practices.	• State-owned monopolies. • Restrictive licensing. • Barriers to convergence operations, e.g., restrictions on CATV operators.	• Cooperatives or municipally-owned operators in rural areas to introduce service and drive competitive. • VoIP and other convergence operators.
	Financial institutions.	• Access to multiple financiers, e.g., equity, corporate loans, bonds, etc.	• Excessive limits on private and foreign investors.	• Framework for small business loans, VC, angel investment, etc.
	Vendors (hardware, software, services).	• Open access to all technologies. • State support to develop domestic technology.	• Force vendors to produce specific technologies (raises prices).	• Partnerships between operators and academia for R&R, training.
	Ancillary businesses (ITES, BPOs).	• Multiple ancillary players drive vibrant market.		• Government support for telecom dependant industries, ITES, BPOs. • Divest non-core SOE assets, e.g., construction.

14. Regional policy-making and regulations in the EU and the SADC harmonize policy and regulation, creating a consistent environment for business to deploy new services.
15. In Australia, the Communications Authority is responsible for regulating telecom, including promoting industry self-regulation. However competition issues within the telecom sector are handled by the Competition and Consumer Commission, which is responsible for enforcing telecom related provisions of the Trade Practices Act.
16. In 2004, India introduced a universal licenses regime, integrating all telecom services – basic, LD, mobile, paging, satellite TV and VAS – into a single license with common cost, structure, and obligations, e.g., universal service payments. This simplifies licensing, and hence is seen as a mechanism to introduce competition.
17. In 2000, India created the Telecom Disputes Settlement and Appellate Tribunal (TDSAT) to adjudicate disputes between a licensor and a licensee, between two or more service providers, or between a service provider and group of consumers, and to hear and dispose of appeals against any direction, decision or order of the regulator.

Stakeholder	Role	Best practices	Worst practices	Innovations
Civil Society	Consumers (business residential)	• Consumer/business groups to protect and inform the public.		
	Unions	• Proactively and positively impact reform.		• Stakeholder forums to educate unions and involve them in the policy process.
	Associations	• Multiple trade groups for operators, ISPs, consumers, etc.		• Initial government support for the creation of these associations, e.g., Indian ESC[18]. • Support on entrepreneurs and VC[19].
	Academia	• Government grants for academic research, i.e., White Papers, studies. • Government funding for tech. training, R&D.		• Industry sponsored R&D and academia products, programs, and training.

the Competition Commission may play an important (yet undefined) role in managing anti-competitive behavior.

Secondly, while the government has made important and notable strides in improving the regulatory environment to meet international norms, Vietnam needs to create a separate and autonomous regulatory function outside of the MPT. Other weaknesses in the current regulatory environment include the need to establish a cost-based tariff and interconnection regime, the lack of which results in cross-subsidies and high prices on some essential services. The licensing process also lacks sufficient procedures, public information and communications. These factors provide an additional obstacle to attracting market entrants and competitive operators.

Lastly, and most importantly, the government needs to build consensus for change from all stakeholders and segments around privatization. This process involves better public access to sector information and government coordination for non-government actors within civil society, notably consumer groups and trade associations. This includes a role for stakeholders currently precluded from Vietnam's sector – private investors, foreign investors, financial institutions and international organizations.

The VNCI recommendations, outlined in Figure 28, are meant to be forward looking, targeting the successful achievement of Vietnam's sector goals. But let's be perfectly clear. Vietnam has initiated the reform process, but significant additional action is required.

Vietnamese telecom stakeholder conference

Realizing that these issues are complex and difficult to address, the VNCI suggests the organization of a Vietnamese Telecom Stakeholder Conference, sponsored by leading stakeholders and decision-makers in government, business and the private sector. This model was very successful with USAID's Southern African Regional Telecommunications Restructuring (RTR) Program. In several countries, USAID brought together key telecom stakeholders from government, business and the civil society to engage in a fact-based discussion with national, regional and international experts on topics ranging from investment opportunities, specific regulatory issues, e.g., licensing and universal service, and privatization. The forum allowed honest discussion of the

18. The Electronics and Computer Software Promotion Council (ECS) is a quasi-government agency of the Ministry of Communications including the telecom, computer, ITES, BPO, electronics industry. The ECS sponsors research and analysis, organizes trade events, supports Indian trade associations, and tracks results.
19. Competition Review of the Telecom Sector in Vietnam.

Figure 28: A roadmap for change

Recommendation	Action
Telecommunications Policy	• Allow foreign private sector ownership in the telecom sector. • Require that industry submit market information on a regular basis, e.g., every three months, with more detailed annual analysis. • Draft and publish a quarterly telecom report that maps industry trends and actions to government objectives. • Create quasi-ministerial commission to develop civil society associations and organizations, e.g., ISP association, consumer group, trade publications, et al. • Introduce a specialized court to deal with telecom and IT issues. • Initiate process to revamp telecommunications law (inclusive of the recommendations in this table).
Regulatory Transparency	• Create independent regulator separate from MPT. • Improve public availability of information by consistently updating regulator's public website, including policies, procedures and online complaints. • Develop a code of conduct for regulatory employees, including restrictions on gifts, and revolving door employment. • Eliminate dual role between VNPT and MPT employees.
Strengthen Vietnam's interconnection regime	• Issue additional interconnection guidelines that: - explicitly defines non-discriminatory behavior; - strengthens guidelines re: 'misuse' of information; - defines reasonable interconnection costs and delays of service; and, - sets out administrative policy to prevent and rectify such behavior, e.g., mandatory arbitration, investigative process and fines. • Develop a cost accounting policy, e.g., chart of accounts and cost allocation, to identify and eliminate subsidies that: - use industry best practices; - define costs, and determine cost methods and calculation; - outlines accounting practices and guidelines; and - taps private sector and international expertise, e.g., consultants. • Clarify role of the Competition Commission in the telecom sectors as it pertains to Vietnam's new competition law.
Strengthen Vienam's licensing regime	• Further development of the licensing criteria. • Introduce concept of universal licenses to increase competition.
Tariff rebalancing	• Based on a cost account policy, initiate process to rebalance tariffs and eliminate cross subsidies.
VNPT reform	• Reorganize VNPT through a series of radical changes in structure, management and accountability: - Create separate accounting for different businesses; - Prepare and issue a type of 'code of ethics' and rules for its subsidiaries, especially provincial/district PTTs, about what anti-competitive actions they must not take, especially in relation to essential competitive issues such as interconnection, etc; - Spin-off non-core assets; and - Sell-off cross ownership in competitors. • Privatize VNPT along geographical lines and/or lines of business, e.g., multiple operators to increase competition. • Privatize other state-owned telecom operators.

issues, opportunities for concerns to be raised among various stakeholders and, most importantly, allowed for the development of a consensus for change.

The Vietnamese Telecom Stakeholder Conference could set up similar discussions between stakeholders to address the issues and actions to move forward. Invited participants should include the widest array of decision-makers and interested parties, including Vietnamese government officials, regional regulators from India, the Philippines, Thailand, etc., business people, the media, international organizations such as the World Bank, ADB, USAID, etc. For example, Vietnamese policy-makers could discuss when Vietnam can begin the consensus-building process required to aggressively drive forward with the telecommunications reform process.

BIBLIOGRAPHY

ASEAN Secretariat, *Liberalization and Harmonization of the Telecommunication Sector in ASEAN Countries,* 2004.

'A competition going through a blind alley', Thanh Nien Online, 28 July, 2004.

C. Qiang, *A Comparative Study of Market Separation and Regulatory Responsibility in China, Spain, Brazil and the U.S*, World Bank memo, 2004.

Government of Vietnam, *Development Strategy until the year 2010 and the Orientation until the year 2020.*

Government of Vietnam, 2001. *Decision 158 on Post and Telecommunications.*

Government of Vietnam, 2004. *Decree 160 on Telecommunications.*

Hoang Ly, *'Competition According to 'Jungle' Laws'*, Thanh Nien Online, 13 September, 2004.

Intven, Hank and Tetrault, McCarthy (2000). *Telecommunications Regulation Handbook,* The World Bank, Washington, DC.

International Telecommunication Union (2002). *Trend in Telecommunication Reform*. Geneva.

ITU, *Vietnam Internet Case Study*, Geneva, 2002.

Ministry of Post and Telecom, 2003. *Decision 148/2003/QD-BBCVT on Telecom Tariffs.*

Ministry of Post and Telecom Website, www.mpt.gov.vn.

Phong Lan, *'Enterprises Are In Big Trouble Because of High Leased Lines Fees'*, VnExpress, 31 March, 2004.

Prime Minister's Office, 2003. *Decision 217/2003/QD-TTg on Regulations of Telecom Charges and Tariffs.*

Standing Committee of the National Assembly of Vietnam, *Ordinance on Post and Telecommunications,* 2002.

'Vinaphone, MobiFone Violate Interconnection Charges Regulations'. VnExpress, 19 April, 2004.

Printed under Publishing Permit No. 04/1099/XB-QLXB issued on July 12th, 2005 by the Publishing Department
500 copies in Vietnamese and 300 copies in English in A4 size
Sample copies filed to state archives in August 2005
Designed and printed by Luck House Co., Ltd.

development alternatives, inc.

Development Alternatives, Inc. (DAI) is a global consulting firm providing social and economic development solutions to governments, communities, and companies with projects in developing and transitioning countries. Founded in 1970 and headquartered in the Washington, DC area, DAI now includes companies in Brazil, South Africa, Palestine, and the United Kingdom. DAI's 1,600 employees work in 75 countries. Clients include global development agencies, international lending institutions, global corporations, and host country governments.

The Asia Foundation

The Asia Foundation is a non-profit, non-governmental organization committed to the development of a peaceful, prosperous, and open Asia-Pacific region. The Foundation supports programs in Asia that help improve governance and law, economic reform and development, women's participation, and international relations. Drawing on 50 years of experience in Asia, the Foundation collaborates with private and public partners to support leadership and institutional development, exchanges, and policy research. With a network of 17 offices throughout Asia, an office in Washington, D.C., and its headquarters in San Francisco, the Foundation addresses these issues on both a country and regional level.

U.S. Agency for International Development
Regional Development Mission - Asia
USAID/Vietnam Program Office
Tung Shing Square Tower Building, 15th Floor, 2 Ngo Quyen Street
Hanoi, Vietnam
Tel : (84-4) 935-1260
Fax: (84-4) 935-1176
www.usaid.gov