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Vietnam

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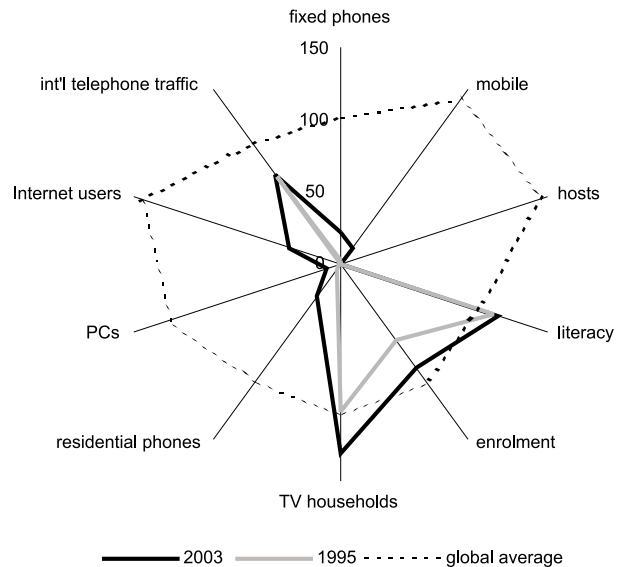
Overview

The ICT sector of Vietnam continues to make gradual progress. As of December 2004, the country had a total international Internet bandwidth of 1,892 Mbps. The Internet subscriber base stood at 2 million (2.5 percent of the total population), while the number of Internet users was 6.1 million (7.4 percent of the population). There were 10 million telephone subscribers in the country, representing 12.5 percent of the population. Fixed-line subscribers accounted for 54.8 percent of this total.

As of May 2004, the telecommunications operators in the country comprised the following: 6 providing Internet access, 3 fixed-line telephone services, 4 mobile phone services and 13 Internet services. Among the ISPs, Vietnam Data Communications had a 59.3 percent market share, Financing and Promoting Investment 22.6 percent, Netnam 7.0 percent, Saigon Postal 6.9 percent, Vietel 2.5 percent and IOC 1.7 percent.

The Ministry of Post and Telematics continues to lower charges for Internet and telecommunications services to match those in the region. During 2003, 12 types of services fees were reduced by about 10–25 percent.

Industries

Software

There were about 570 companies employing some 12,000 people engaged in software development and services at the end of 2003. An estimated 38 percent of them were local companies. This industry generated revenue of over US$75 million in 2002 and US$120 million in 2003. It grows an average of 41 percent annually.

Despite the presence of supportive policies and tax incentives, the annual value of the software market is far short of the government's year 2005 target of US$500 million. This industry is still plagued by the lack of IT expertise and low productivity.

Hardware

The computer hardware market was worth about US$400 million in 2003. Foreign manufacturers include Fujitsu making circuit boards for hard drives, Samsung VINA producing monitors, and Canon manufacturing printers. There are also local companies, such as Hanel and Vietronic Thu duc, involved in hardware manufacturing.

The total number of computers sold in Vietnam in 2003 was estimated at 350,000 units, of which 15 percent were imported fully assembled and the rest were assembled locally. Most of the locally assembled computers are without brands. There were about 20 companies assembling Vietnamese-brand computers, which accounted for about 25–30 percent of the market and are considered of better quality than unbranded computers. Locally assembled computers are purchased mainly by private sector companies and households. About two million computers have been installed in the country, and computer sales are growing at about 20 percent per annum.

Enabling policies

The implementation of the Master Plan on IT Use and Development, which was approved in 2002, has produced some results. The plan aims to accomplish four main goals by 2005:

1. To raise the application and effectiveness of ICT throughout the country to medium level compared to other countries in the region, and to increase ICT application in the Party and state agencies, political and social organisations, and leading economic sectors such as banking and finance, in Hanoi and Ho Chi Minh City to the level of the more developed countries in the region.

2. To develop Internet and telecommunications networks of high bandwidth using modern technologies to provide consumers with a variety of services at prices that are comparable to or lower than average prices in the region. To link all provinces and cities throughout the country by fibre optic cables and to raise the number of Internet users to 4 or 5 percent of the total population.

3. To achieve an average annual growth rate of 20–25 percent for the ICT industry with the use of the new technologies to support the development of key industries and to help maintain high and sustainable economic growth.

4. To produce an additional 50,000 ICT experts of different levels, half of whom as high-level experts and professional programmers with a good command of foreign languages.

To help the attainment of the above goals, four main programmes were launched with the following focuses:

• Accelerating the use of ICT
• Developing and improving the telecommunications and Internet infrastructure
• Establishing and developing the ICT industry
• Developing ICT human resources

The master plan and the four programmes have led to some positive developments following implementation. The plan has guided the creation of new mechanisms and policies for promoting ICT use and development. In terms of usage, about half of local enterprises are deploying ICT to manage their business operations, including the manufacturing process and the performance of services. ICT has become indispensable to many companies, especially those in industries such as banking, finance, telecommunications and aviation. Some of the companies have even begun e-commerce to support their operations. In the government sector, ICT use has become common and some e-government services have been launched.

The use of ICT to support education and training has begun. There are about 300 webpages providing information on education, distance learning, university entrance examinations and others. Distance learning programmes have been established at key educational institutions and training centres. An education network, Edunet, is being developed by the Ministry of Education and Training together with the Ministry of Post and Telematics. Work commenced in 2003 to connect 2,057 upper secondary schools to the Internet. A total of 1,900 schools, universities, colleges and vocational training schools had been connected by the end of that year. This number included all the universities and colleges in the country; 10 of the universities were connected via their own leased lines, 40 had built LANs and 14 had established e-libraries.

People have begun to make use of digital information, especially online newspapers and newsletters. More than 20 online newspapers of all kinds had been established by the end of 2003. ICT has also been deployed for agriculture and rural development, as in the provision of online newsletters for rural residents and the establishment of 6,755 small libraries in commune centres offering printed material on agriculture and rural development and, in some cases, provide users with Internet access.

Infrastructure-wise, telecommunications networks are continually being modernised and expanded while telecommunications and Internet services are being diversified at the same time. Important steps have been taken to dismantle state-owned monopolies and introduce competition. The Ordinance on Post and Telecommunications issued in May 2002 has allowed every economic sector to take part in the provision of telecommunications services.

New services such as wireless Internet access, Internet telephony, high-speed ADSL, and CDMA mobile phone services have been launched. The charges of telecommunications and broadband services are falling, and price control mechanisms are being improved.

Policies aimed at promoting the development of the ICT industry have succeeded in attracting businesses to this sector. By July 2003, there were about 2,500 companies registered, of which about 500 were software companies. Centralised "software zones" have been established, especially in Ho Chi Minh City. The computer assembly sector, too, has made much progress with the establishment of nearly 20 assembly plants producing local brands from imported components. In 2003, these PCs accounted for a 25–30 percent share of the domestic market. Foreign hardware manufacturers have also set up plants here.

ICT education and training has evolved quickly in vocational schools, universities and colleges. Postgraduate studies are offered too. In addition, degree-level ICT courses are available to graduates from other disciplines to help build ICT capabilities in these fields. Many companies have invested in ICT training as well. There is significant international input in the training programmes, coming from Indian training companies and large ICT firms, US and Australian universities, and Japanese organisations. At the school level, computer science is now taught in upper secondary schools across the country, and it has been introduced as an optional subject in selected lower secondary and primary schools.

However, the master plan has not been entirely successful. The implementation of its plans and programmes is in fact low. As such, certain targets set for 2005 need to be adjusted. For example, the software export target of US$200 million is now deemed difficult to achieve by 2005. This slow pace of implementation stems partly from a lack of awareness and understanding among government officials of the importance of these programmes. Also, ICT use and

development has not been considered a priority in the implementation of socioeconomic programmes at the ministerial, departmental and local levels. Efforts at these levels are not synchronised, and mechanisms for coordinating, monitoring and implementing the programmes are inconsistent. Furthermore, an enabling environment for the development and adoption of ICT has not been fully established, with relevant legislation, mechanisms and guidelines still lacking.

In terms of adoption, policies to promote ICT use in the private sector are lacking. Funding is insufficient for the adoption of ICT in education, training and research. Although the government's ICT capacity has been strengthened, it is not properly coordinated and sufficiently integrated across central government units, ministries, departments and local offices to allow them to effectively share and exchange information and to efficiently carry out public services.

Despite infrastructural expansion, the Internet subscriber base remains low, the use of broadband services limited, and the quality of Internet services uneven. The lower charges are still unaffordable to the majority of people. For example, the monthly cost of about US$70 for broadband connection is too high for most households. To speed up infrastructural development, the ICT sectors need to be further opened up to private investment. At present, most of the telecommunications companies and ISPs in the country are either wholly or partially state owned.

The synchronised implementation of two key programmes for developing the hardware and software industries has been delayed as a result of personnel changes in the agencies concerned, while policies on infrastructure development for ICT industrial zones are not coordinated. Policies and measures are not in place to help companies raise their competitiveness, to protect software copyright and to promote investment in the domestic ICT industry. For these reasons, Vietnamese companies are unable to compete in the marketplace.

There are still insufficient experienced, quality ICT workers, especially those at managerial levels, to meet the demand of the industry. There is no improvement either in the foreign-language proficiency of ICT professionals. Training programmes have not been standardised and updated regularly. Training for the software industry remains limited and is unable to meet the demand for software workers. Courses tend to focus on the use of popular applications, with limited advanced training.

Much work still needs to be done for Vietnam to catch up with the regional level of development in ICT.

Open source movement

In March 2004, a master plan for applying and developing open source software (OSS) for 2004–2008 was approved. The plan sets out the following objectives:

- To accelerate the application and development of OSS, enhance the protection of software copyright, reduce the cost of software, and promote the development of IT in general and the software industry in particular.
- To develop a core of competent technical experts in OSS application and development.
- To create OSS products that meet the needs and requirements of users in Vietnam.

The master plan lists out several tasks to be undertaken in order to meet these objectives. First, policies will be made to promote the application and development of OSS through establishing enabling mechanisms and incentives to encourage the participation of organisations in training, education and research in OSS; encouraging local and overseas Vietnamese individuals and organisations as well as international experts and organisations to invest in business development, technology transfer, and training in OSS in Vietnam; and stipulating the use of OSS in the public sector. Policy formulation will be undertaken by the Ministry of Post and Telematics.

Second, the use of OSS will be promoted beginning with trial deployment in Hanoi, Ho Chi Minh City and the ministries of National Defence and of Public Security before nationwide adoption.

Third, training in OSS application and development will be organised to build a pool of developers, technical support staff, teachers and instructors in OSS. Training programmes will be developed for government personnel as well as students in universities, colleges, vocational schools and high schools. Teachers, instructors and outstanding students will be selected for training abroad. The Ministry of Education and Training, the Ministry of Labour, Invalids and Social Affairs, and the Ministry of Internal Affairs will be involved in implementing these programmes.

R&D in OSS will be another priority area, and an R&D laboratory for OSS applications will be established. This area will be the responsibility of the Ministry of Science and Technology. Core software will be developed by localising foreign software that meets the requirements of the country. Open source standards will be formulated, a product quality testing and verification system set up, and a training certification system put in place. At the same time, business, research and educational organisations will be encouraged to provide OSS support services.

Lastly, international cooperation on OSS will be fostered through participation in activities organised by regional and international OSS organisations as well as collaboration with foreign partners in OSS research and business development.

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