21. Country Report of Viet Nam[1]

21.1 Current Status of the ICT Sector of Viet Nam

<u>Economic Background of ICT in Vietnam</u>
ICT industry in Vietnam began to develop in the 1990s; it focused on 3 main fields including hardware, software and digital content. While the hardware sector has begun to slow down, software and especially digital content have grown at a phenomenal rate.

ICT industry has been becoming a rapid growth rate and sustainable economic sector with high revenue, great export value and considerable contribution to Vietnam's GDP. Total number of businesses operating in the sector was approximately 24,500 (as of 2016); total revenue of ICT industry in 2016 was roughly USD 66.7 billion (or 11.5% increase compared to the year 2015); of which, revenue from hardware was USD 58.9 billion, software revenue was more than USD 3 billion, and the rest came from digital content and ICT services. In 2016, ICT export quota reached more than USD 60 billion for the whole country[2].

In 2016, the ICT industry kept a steady growth when the economy of Viet Nam showed signals of recovery. Coupled with Vietnam's upward economic trend, the Vietnamese government and businesses are strategizing to upgrade the country's information technology (IT) infrastructure. The strategy is aimed to increase total revenue of the IT sector as a percentage of Vietnam's GDP. In April 2015, the Prime Minister issued Resolution #26/NQ-CP, instructing all Ministries and local governments to promote the application and development of IT to serve the purpose of successfully developing economy sustainably and integrating internationally. In addition, as Vietnam has become a member of ASEAN's Economic Community as well as Asia Pacific Economic Community (APEC), the enterprises are expected to increase spending to upgrade their IT infrastructure. The goal of the upgrades is to improve operational efficiency and expand business.

<u>The Ranking of Vietnam's ICT Industry Got Improvements According to International Evaluation</u>
According to the ranking of the evaluation report on Measuring of Information Society by the International Telecommunication Union (ITU), the ICT Development Index (IDI) of Viet Nam in 2017 was 4.43, ranked 108th among 176 countries in 2017; and ranked 17th among 34 countries in

---

[1] This report was written by Nguyen Thi Bich Thuy, Director, Research Center for Female Labour and Gender, Institute of Labour Science and Social Affairs, Ministry of Labour, Invalids and Social Affairs, Viet Nam.
[2] Ministry of Information and Communication of Viet Nam

Asia - Pacific. The IDI access sub-index was 4.75; the IDI use sub-index was 3.65 and IDI skill sub-index was 5.31.

According to the ranking in the Global IT Report by the World Economic Forum(WEF), the Networked Readiness Index (NRI) of Viet Nam in 2016 reached the 79th among 139 countries, an increase of 6 grades compared to 2015.In this evaluation, the sub-index on access to ICT services of Viet Nam was ranked 3rd among 139 nations. The broadband internet price in Viet Nam was the lowest in the world and ranked the 1st among 139 countries.

ICT Infrastructure Continued Being Invested in and Upgraded to Satisfy Robust Growth of the Economy

Per the EIU, spending on IT will rise to $5.1 billion in 2017, an increase of 9.8 percent y-o-y. In 2016, spending on IT hardware continues to dominate the biggest share (86 percent) of the total spending, with software and services representing 6 percent and 8.3 percent of the market. Key players in the hardware market include suppliers from Taiwan, China, the U.S., and Japan. Major players in the software market include suppliers from the U.S., Germany, China, Russia, and Vietnam.

Telecommunications

Total telecom service revenue in 2017 is expected to reach $6.9 billion. Mobile data services own the major share (36.8 percent) of the sector[3].

In 2016, there were 74 businesses providing fixed public telecommunication network and 5 businesses offering public land mobile network. Viettel, Mobifone, and VNPT-Vinaphone continue to dominate Vietnam telecom market with over 90 percent shares. Viettel is the largest player currently and estimated to be at the same position through 2020. As of October 2016, the four operators had gained 4G licenses were Viettel, VNPT-Vinaphone, Mobiphone, and Gtel. In 2017, with strong investment, 4G services are estimated to rollout and expand rapidly[4].

Mobile Phone Networks

At present, there are six mobile operators in Vietnam; VNPT-Vinaphone, Mobiphone, Viettel, Vietnammobile, Gtel, SPT. Per Vietnam's Ministry of Information and Communications, in 2016 there were 128 million subscribers of mobile phones, of which 63 million were Viettel users, 34.6 million on Mobiphone, 20.5 million used VNPT-Vinaphone, 5.9 million on Gtel, and 3.6 million

---

[3] Ministry of Information and Communication of Viet Nam, "Vietnam Information and Communication Technology 2017"

[4] Ibid

are subscribers to SPT and Vietnammobile. In 2016, the mobile cellular subscriptions per 100 inhabitants were 128.04[5].

Fixed Phone Networks

In fixed phone networks, the five operators (VNPT, Viettel, FPT Telecom, SPT, and VTC) provide services to over 7.3 million fixed phone subscribers in Vietnam. In 2016, the fixed telephone subscriptions per 100 inhabitants were 5.94[6].

Internet

As of January 2017, number of fixed broadband internet subscribers is 9.3 million, while the number of mobile broadband internet users via 3G network is nearly 44 million. Per Business Monitor International, the internet market in Vietnam is forecasted to grow at a rapid annual pace of 9 percent for the next few years due to the strong growth of applications, e-commerce, and internet TV.

In 2016, percentage of individuals using the internet was 46.50%; the fixed (wired) broadband subscriptions per 100 inhabitants were 9.91; and the active mobile broadband subscriptions per 100 inhabitants were 46.63[7].

Vietnam is continuing to be the leader in ASEAN region in the number of country domain name registrations. Total number of domain names ".vn" in the system is currently 386,751[8].

Leading Sub-Sectors

From 2010 to 2015, urbanization in Vietnam increased 3.4 percent per year, and currently one in three Vietnamese people live in urban areas. The United Nations projects that half of the Vietnamese will live in cities by the year 2040, placing an increasing burden on municipalities. Vietnamese governments at both the central and city levels have institutionalized their strong support of smart city development in Vietnam to help improve services to the growing urban areas while reducing or maintaining costs.

The growing Internet and mobile phone penetration is helping to drive smart city development and e-government solutions. Significant financing support provided by international donors, such as the World Bank, is behind this growth area. As the Vietnamese government continues to encourage

---

[5] lbid

[6] lbid

[7] lbid

[8] lbid

and facilitate public-private partnerships in urban infrastructure projects, more funding will likely become available for the development of smart cities in the larger cities in Vietnam.

Mobile Phones

Coupled with growing e-commerce and over-the-top applications, the rising income of the tech-savvy population in Vietnam is expected to drive the market for mobile phones at an estimated 12-13 percent from 2015 to 2018. The major suppliers of mobile phones in Vietnam include Apple, Samsung, Microsoft, Asus, Sony, HTC and Oppo.

Cyber Security Equipment and Software

After Vietnam Airlines' computer system was hacked and the personal information of some 400,000 of its customers was published online in July 2016, and the international ransom ware attack in May 2017, the Vietnamese government and its enterprises have increasingly paid attention to cyber security.

ICT Skills

In 2016, total workers in ICT industry were 780,926; of which, more than 568,000 persons (or 72.6%) worked in hardware and electronic fields, the rest 27.4% participated in software, digital content and IT services. The number of IT workers in centralized IT zones was 36,000, or 80% increase compared to 2015[9].

As for ICT human resources training, by the end of 2016, Viet Nam have 250 universities and colleges which offered training courses on telecommunications and IT majors with the total enrollment quota exceeding 68,883 students. Viet Nam also have 164 vocational colleges and vocational secondary schools which offered training courses on telecommunications and IT majors with the total enrollment quota exceeding 18,331 students[10].

---

[9] Ibid

[10] Ibid