

# Vietnam-India cooperation in the field of information technology

Dong ThiThuy Linh

*Vietnam Institute of Indian and Southwest Asian Studies  
Vietnam Academy of Social Sciences*

Date of Submission: 10-09-2023

Date of Acceptance: 20-09-2023

## ABSTRACT

In the field of information technology, Vietnam and India have implemented a number of cooperation activities in human resource training and development, exchange of equipment supply, cooperation in exchanging applications however the potential of cooperation between the two countries has not been fully exploited yet. In the coming time, the cooperation in the field of information technology between Vietnam and India will focus on areas where the two countries have great potential such as: e-commerce, fintech, smart city development, 5G technology, network security, application of blockchain technology in healthcare, human resource development in the field of information technology, information technology ecosystem, cloud computing and cloud computing services, applying information technology in promoting people-to-people diplomacy.

## INTRODUCTION

India is known as a leading country in information technology. The National Association of Software and Services Companies (NASSCOM) of India says that India's information technology industry has the potential to reach \$300-350 billion in annual revenue in the next five years, increase sharply from \$190 billion in fiscal year 2020-2021, calling this decade a tech decade (techade) (Huy Le, 2022). Before the pandemic, information technology companies in India had growth in the range of 6-7%, but are now forecasting an annual growth rate of up to 15-20%, thanks to an unprecedented upward trend in digital consumption, and demand is expected to remain strong in the coming years. Besides, Vietnam is a potential information technology market with a wide range of innovative products and solutions, as well as possessing many young talents and an attractive investment environment. This is a fertile land for Indian businesses to consider exploiting and investing. Cooperation in information technology is an important area of cooperation in

the comprehensive strategic partnership between India and Vietnam. In particular, the importance of the digital ecosystem is growing during the post-pandemic recovery period. This article gives the most general picture of the current situation of Vietnam-India cooperation in the field of information technology, as well as the possibility of cooperation between the two countries next time.

## 1. Current situation of Vietnam-India cooperation in the field of information technology

Currently, the documents on cooperation in the field of information technology between Vietnam and India are still quite limited, mainly the memorandum of understanding between the two countries. Memorandum of Understanding (MoU) on frequency cooperation between the Radio Frequency Department of Vietnam (RFD) and the Wireless Planning and Co-ordination Wing (WPC) and MoU on telecommunications cooperation between the Vietnam Telecommunications Authority (VNTA) and the Telecom Regulatory Authority of India (TRAI) was signed within the framework of the Minister Nguyen Bac Son's working visit to India on July 4, 2013. Minister of Information and Communication- Nguyen Bac Son held talks with Indian Minister of Communication and Information Technology (MCIT) KapilSibal and both ministers witnessed the signing of these two MOUs. Minister KapilSibal stated that telecommunications and information technology are among the leading drivers of India's economic and social development. He also emphasized that the signing of two Memoranda of Understanding (MoUs) on technology cooperation represents a significant leap forward in bilateral cooperation. The governments of India and Vietnam have also established institutional mechanisms to facilitate collaboration in the fields of Information and Communication Technology (ICT) and digital transformation. This was underscored once again in the Vietnam-India Join Vision for Peace,

Prosperity, and People, signed in 2020, which highlighted that the economic and developmental partnership between the two countries will be bolstered by new technologies, innovation, and digitization. It emphasized the increasing significance of the digital ecosystem in the post-pandemic recovery phase, contributing to the enhancement and elevation of the digital partnership between the two nations in the times ahead. Furthermore, within the framework of the official visit to India by Chairman of the National Assembly Vuong Dinh Hue from December 15-19, 2021, Minister of Information and Communications Nguyen Manh Hung held a working session with India's Minister of Electronics and Information Technology, Rajeev Chandrasekhar, and signed a Memorandum of Understanding on cooperation in the field of information technology and electronics between the two countries. In order to further develop the Comprehensive Strategic Partnership between the two nations, the two Ministers agreed to jointly explore the establishment of a new framework for collaboration through the period from now until 2030, aiming to establish a Digital Partnership between the two countries

In recent years, information technology and communication have emerged as a promising area of cooperation between Vietnam and India. Many Indian information technology companies have a presence in Vietnam. These companies contribute to enhancing Vietnam's information technology and communication capabilities through training and providing solutions and services in various fields such as finance, banking, telecommunications, and technology in tourism, etc. The Centre for Development of Advanced Computing (C-DAC) and Tata Consultancy Services (TCS) in Noida, India have various research and development programs in information technology, making significant contributions to India's national development. Additionally, these centers engage in international cooperation activities, especially in collaboration and support for Southeast Asian countries, including Vietnam. Two specific projects are noteworthy: The first project is the Vietnam-India Information Technology and Communication Resource Center (ARC-ICT) in Hanoi. From September 2011 to July 2013, the center conducted 11 courses with 315 participants who were government officials in Hanoi. It also collaborated with the National Institute of Information Technology (NIIT) to train 300 students to provide human resources to society. Moreover, the center sponsored the Hanoi University of Science and Technology (Bach Khoa University) for the project "Support for Enhancing

High-Performance Computing Capabilities in Vietnam" through non-refundable aid. This project supported the construction of a supercomputing system worth 50,684,000 rupees, equivalent to 1,200,000 USD (Minh Ly, 2013)

In the field of training IT professionals, India has been one of the countries that supported Vietnam from an early stage. As far back as 1999, India assisted Vietnam in developing high-quality IT human resources through the implementation of the Aptech International Programmer Training program. India's support for the IT industry in Vietnam at that time was of paramount importance. During the 1990-2000 periods, when the Internet was just emerging and the software industry was still very young and rudimentary, Vietnam took the first steps to establish the IT sector. At that time, Vietnam lacked fundamental training platforms, experts, and standardized teaching materials. The global IT landscape had not been widely recognized: which technologies were being applied, what updates were needed, and so on. Most importantly, effective training methods were yet to be defined. After 20 years of establishment and development in Vietnam (2009-2019), currently, the Aptech Group is collaborating with the Ministry of Education and Training of Vietnam to organize Industry 4.0 technology training for university lecturers. This initiative aims to help Vietnam lay the first bricks for the foundation of its human resources to serve the Industrial Revolution 4.0. At the Workshop on Solutions for Training IT Human Resources for Industry 4.0, held in Hanoi on July 3, 2019, Deputy Ambassador of India - Mr. Rajesh Uike - stated: "Aptech Vietnam has trained over 100,000 highly skilled IT professionals. What's remarkable is that Aptech has brought India's leading technology to support Vietnam, collaborating with universities to provide Vietnamese students with opportunities for development in Industry 4.0." India's support directions - particularly from Aptech Group - for the IT sector in Vietnam contribute to accelerating the pace of educational system development and producing high-quality IT human resources, yielding rapid effectiveness and aiding Vietnam's strong integration into the Industrial Revolution 4.0. Furthermore, each year Vietnam sends a number of Vietnamese students to Bangalore to study various fields of IT at all levels: Bachelor's, Master's, and Doctorate. Bangalore is a major economic, cultural, and tourist hub of the Karnataka state. Numerous reputable Indian IT and software companies placed in Bangalore, exerting significant influence on the global IT industry. Currently, a leading Vietnamese university in the

field of IT is preparing to establish an outstanding-level IT training center named the renowned IT city, Bangalore.

Currently, many Indian information technology companies have a presence in Vietnam, and conversely, the FPT Group has also established ventures in India. Indian companies operating in Vietnam have contributed to enhancing Vietnam's information technology capabilities through IT training and providing IT solutions and services in various sectors such as finance, banking, telecommunications, tourism technology, and cybersecurity. Some startup companies have also entered the Vietnamese market and are active in fields like financial technology and travel technology. The governments of India and Vietnam have established mechanisms and frameworks to facilitate cooperation in the field of information technology. This was reiterated in the India-Vietnam Joint Vision for Peace, Prosperity, and People, approved by the Prime Ministers of both countries in December 2020

Overall, Vietnam and India have undertaken various collaborative activities in terms of training, human resource development, equipment exchange, application sharing, and industrial development programs. However, the full potential of cooperation between the two countries has yet to be fully realized. Currently, Vietnam and India are jointly developing numerous collaborative programs to optimize potential and further expand cooperation in various fields. Nevertheless, in the realm of information technology, the outcomes achieved so far remain relatively modest

The biggest challenge hindering the effectiveness of the cooperative relationship between businesses of the two countries is that Vietnamese enterprises lack sufficient information and understanding about the potential, advantages, and technological capabilities of Indian businesses. Currently, the relationship between the two countries is very positive, but it mostly remains in the realms of politics, society, and diplomacy. Economic and trade cooperation between the two nations still faces many limitations, with Indian products having limited presence in the Vietnamese market. Therefore, India needs to intensify communication campaigns, promotion, and widespread dissemination of the potential and strengths of India in fields such as information technology, smart urban development, startups, healthcare, etc.

## **2. The possibility of cooperation in the field of information technology between Vietnam and India**

In 2020, amidst the global disruption caused by the COVID-19 pandemic, information technology emerged as a powerful tool with effective applications in various domains such as administration, financial technology, education, business, office work, and social connectivity. Both Vietnam and India currently emphasize the significance of information technology in national development and the advancement of their socio-economic landscapes. Both nations are focusing on accelerating digital transformation programs, viewing them as catalysts to propel rapid development in digital economy, digital society, and digital governance. Both Vietnam and India have outlined ambitious visions for the fields of information technology, communication, and Industrial Revolution 4.0. These visions hold promise to provide numerous opportunities for collaborative development between ICT businesses in Vietnam and India.

Vietnam has emerged as one of the leading countries in the ASEAN region in terms of robust development in the information technology sector. Renowned multinational technology companies like Samsung, LG, IBM, Intel, Oracle, Canon, Fujitsu, and Foxconn have established manufacturing facilities in Vietnam. The IT and communication sector has significantly contributed to Vietnam's export growth, making it an attractive investment destination for major global IT and communication companies. In June 2020, the Vietnamese Government approved the National Digital Transformation Program until 2025, with a vision for 2030. Vietnam aims to increase the contribution of the digital economy to its GDP to 20% by 2025 and 30% by 2030. Additionally, the country aims to be among the top three leading ASEAN nations in terms of digital governance by 2030 (Hung Quan, 2022). Aligned with this strategy, Vietnam is concentrating on developing digital governance, a digital economy, a digital society, and fostering digital enterprises. The nation is also focusing on creating digital platforms, applying emerging technologies to provide new services to citizens, devising policies for open data, and implementing comprehensive digital transformation programs for businesses, particularly small and medium-sized enterprises. To achieve these goals, Vietnam has implemented proactive measures, including the development of high-tech zones, IT-focused technology parks, cloud computing technology advancement, and the establishment of smart cities with 5G networks in key economic areas nationwide. The government is creating favorable conditions for Vietnam to become a hub for regional and international ICT

companies. Vietnam is particularly encouraging foreign technology companies to collaborate with domestic enterprises in priority areas such as smart manufacturing, IoT, AI, big data, blockchain, virtual reality, cybersecurity, fintech, 3D printing, 5G ecosystem, and smart cities.

Similarly, in 2015, the Government of India also launched a flagship program called the “Digital India” initiative, with a vision to transform India into a digital society and a knowledge economy. This program focuses on strategically transitioning digital infrastructure into a primary utility for all citizens. Alongside supporting projects and startup programs, the Indian Government has begun implementing modern information technology to restructure systems with the goal of delivering information and services to citizens quickly and efficiently. India has emerged as a hub of digital capabilities with a high competitive edge, recognized globally for its provision of IT services. The revenue of India's IT industry reached approximately \$175 billion in the 2019-20 period, with exports accounting for around \$147 billion (ViệtCường, 2021). In the hardware and software sector, India attracted the second-largest FDI inflow with \$71 billion in the 2020-2021 periods. It is also a favored destination for establishing Global Capability Centers (GCCs), with 50% of the total GCCs located there. India's IT sectors are specializing in 5G technology, cloud computing, e-governance support technology, sustainable technologies such as eco-friendly batteries, renewable energy sources, and power system management. Moreover, the country is exploring emerging technologies like artificial intelligence applications, blockchain, the Internet of Things (IoT), robotics, and 3D printing

To further develop the Comprehensive Strategic Partnership between the two countries, the two Ministers agreed to jointly explore building a new framework for cooperation from now until 2030, aimed at establishing a Digital Partnership between the two nations. A Digital Partnership is understood as a comprehensive collaboration in the realm of digital technology. Comprehensive collaboration, firstly, entails cooperation between the governmental agencies and state management bodies of both countries in the field of digital technology. This involves enhancing the exchange and sharing of experiences in developing digital technology strategies, creating legal environments and frameworks to promote digital technology advancement. Secondly, it involves boosting collaboration between digital technology enterprises of both countries, comprehensively connecting businesses on both sides in terms of

software, hardware, applications, and R&D. Thirdly, it encompasses collaboration in training digital workforce, fostering cooperation between institutions and schools of both nations in the realm of digital technology and information technology.

India has its “Digital Transformation Strategy” program to support the advancement of digital society and knowledge-based economy. Meanwhile, Vietnam also has its National Digital Transformation Program with a vision and goals set until 2025 and 2030. Based on these realities, the opportunities and potential for collaboration between the two countries in the fields of information technology and digital technology are substantial. The visions of both India and Vietnam in developing the IT sector and Industrial Revolution 4.0 will create new collaborative opportunities between the two nations. Digital technology enterprises from both countries are also implementing numerous collaborative initiatives. The forthcoming cooperation in the field of information technology and communication technology between Vietnam and India will focus on areas of significant potential for both nations, such as e-commerce, fintech, smart city development, 5G technology, cybersecurity, blockchain technology applications in healthcare, IT workforce development, IT ecosystem, cloud computing and cloud services, and the utilization of IT for public diplomacy.

#### ***Some proposed directions for cooperation in the near future***

The governments of both countries have also agreed to establish multiple channels for connection to support enterprises in establishing cooperative relationships and promoting commercial and investment activities. Ambassador Pranay Verma also suggests that small and medium-sized enterprises in the information technology sector and startup enterprises from both countries should exchange and collaborate in new areas such as e-commerce, financial technology, and smart cities. Through collaboration, Vietnam hopes that India will share its experiences in building and implementing policies in the ICT industry, the “Make in India” strategy, and the development of Indian IT parks. The two countries need specific cooperation strategies between Vietnamese and Indian enterprises in developing “Make in Vietnam” and “Make in India” initiatives. In addition, the two sides can collaborate to support and create conditions for businesses from both countries to understand, penetrate markets, participate in supply chains of digital products and services; strengthen the comprehensive strategic partnership between Vietnam and India, especially

in the fields of information technology, electronics, and telecommunications. Especially, an extremely important area of cooperation is education and human resource development. Accordingly, the two nations need to intensify cooperation in training and developing ICT human resources, providing scholarships. At the same time, there should be policies for expert exchanges and scientific seminars to support education and research in ICT. Developing human resources training is not only for businesses but also for training human resources between government agencies and supporting research and training centers of Vietnam and India, promoting the sharing of strengths of each country in software development and digital technology solutions

### CONCLUSION

Cooperation in the field of information technology between Vietnam and India still faces many limitations, not commensurate with the potential of the two countries. The greatest challenge hindering the effectiveness of the collaborative relationship between the two countries is that Vietnamese enterprises lack sufficient information and understanding about the potential, advantages, and technological capabilities of Indian businesses. Therefore, both nations need specific cooperation strategies between Vietnamese and Indian enterprises, such as collaborating to support and creating conditions for businesses from both countries to understand, penetrate markets, and participate in the supply chain of digital products and services, etc.

### Tài liệu tham khảo

- [1]. Hùng Quân (2022), Tăng tốc để đưa kinh tế số đạt 30% GDP vào năm 2030, <https://cand.com.vn/Kinh-te/tang-toc-de-dua-kinh-te-so-dat-30-gdp-vao-nam-2030-i670882/#:~:text=Chi%E1%BA%BFn%201%C6%B0%E1%BB%A3c%20%E2%80%9CChuy%E1%BB%83n%20%C4%91%E1%BB%95i%20s%E1%BB%91,30%25%20GDP%20v%C3%A0o%20n%C4%83m%202030>.
- [2]. Huy Lê (2022), Ngành CNTT Ấn Độ có tiềm năng đạt doanh thu 350 tỷ USD, <https://bnews.vn/nganh-cntt-an-do-co-tiem-nang-dat-doanh-thu-350-ty-usd/230518.html>
- [3]. Minh Lý (2013), Việt Nam – Ấn Độ: Tăng cường hợp tác trong lĩnh vực Công nghệ Thông tin, <https://mic.gov.vn/solieubaocao/Pages/TinTuc/108227/Viet-Nam---An-do--Tang-cuong-hop-tac-trong-linh-vuc-Cong-nghe-Thong-tin.html>
- [4]. Việt Cường (2021), Doanh thu của ngành công nghệ thông tin Ấn Độ đạt khoảng 175 tỷ USD trong giai đoạn 2019-20 với xuất khẩu chiếm khoảng 147 tỷ USD, <https://baodansinh.vn/hop-tac-cong-nghe-thong-tin-va-truyen-thong-giua-an-do-va-viet-nam-trong-boi-canh-dai-dich-covid-19-2021062617385667.htm>