

# DEVELOPMENT OF VIETNAMESE SMEs IN THE CONTEXT OF INDUSTRIAL REVOLUTION 4.0

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## ABSTRACT:

The Industrial Revolution 4.0 (IR 4.0) with the formation and development of new technologies have made profound changes to production and business activities, reshaped the production, consumption, transportation and delivery systems as well as created new business models. Industry 4.0 has brought to Vietnamese enterprises in general and SMEs in particular both opportunities and challenges. Therefore, Vietnamese SMEs need to reshape themselves and prepare to welcome "wind" of Industrial Revolution 4.0.

**Keywords:** Industrial revolution 4th, technologies, SMEs, Asia Pacific.

## 1. Development opportunities of IR 4.0

### *IR 4.0 opens up new business models and trends*

IR 4.0 has a strong impact on all aspects of social and economic life in unprecedented ways, both in breadth and depth, radically changing the behavior of individuals and the way enterprises operate. It can be said that two important technological factors in IR 4.0 are Internet (Internet of Things) and digital technology (digital transformation), allowing the creation of digital values and transaction methods unprecedented in history. And, thereby opening up many opportunities for new business models and trends, as well as changing the large business competitive environment, especially for SMEs.

In fact, formerly, SMEs often perceived

technology as their weakness, because they did not have the financial capacity to invest in modern technology and equipment. However, with the connection of multinational companies, SMEs can completely inherit modern technology at very low cost and be guided to operate effectively.

In addition, with a small and simple organizational structure, SMEs can easily collaborate with departments and make quick decisions when they see immediate opportunities. In some cases, some products and services of many technology companies and startups only take about 16 seconds to be launched. Therefore, the speed of launch of their large products is much faster than that of large enterprises and corporations with bulky structures.

***Mechanisms and policies are more complete, helping SMEs to catch up with IR 4.0***

The 2017 Economic Census of the General Statistics Office showed that there were nearly 517,900 existing enterprises nationwide, an increase of 51.6% compared to 2012, of which, SMEs accounted for 98.1%. In order to support SMEs' development, up to now, the policy and legislation framework on credit and credit support for this enterprise sector has been gradually improved in the direction of creating more favorable conditions in order to solve difficulties that help SMEs' development.

In 2017, with the appearance of the Law on Support for Small and Medium Enterprises (SMEs). SMEs were motivated to adapt and develop in IR 4.0 because they were designed in a way that elevates governance, helps them move fast to catch up with the process of international integration. In addition, many provisions in the Law stipulate the support of the State for SMEs

In order to bring the Law to life, the Government drastically directed ministries and agencies to urgently develop documents guiding the implementation of the Law and issued 4/4 relevant decrees to implement the Law, including: Decree No. 39/2018/ND-CP dated 11/03/2018 detailing a number of articles of the Law on Support for SMEs; Decree No. 38/2018/ND-CP dated 11/03/2018 providing for investment in innovative start-up SMEs; Decree No. 34/2018/ND-CP dated 08/03/2018 on the establishment, organization and operation of Credit Guarantee Funds for SMEs; Decree No. 39/2019/ND-CP, dated 10/05/2019 on the organization and operation of the SME Support Fund. In addition, on 24/06/2019, the Government issued Decree No. 55/2019/ND-CP on legal support for SMEs.

In addition, the Prime Minister signed Directive No. 15/CT-TTg, dated 15/06/2018 on the effective implementation of the Law on Support for SMEs. At the same time, ministries and agencies have developed and issued circulars guiding a number of policies on the accounting

regime for micro-enterprises, guiding credit institutions in providing guaranteed loans of the Credit Guarantee Fund, supporting vocational training for laborers in SMEs, supporting human resource training, consulting for SMEs ...

In 2018, the loan interest rate for SMEs continued to be stable at a low level compared to the previous period (currently the interest rate ceiling for priority development fields, including SMEs, entitled to the maximum short-term loan interest rate of 6.5%/year).

Regarding credit support through the SME Development Fund, Ministry of Planning and Investment: Up to now, the Fund has signed an authorization contract lending 14 projects of SMEs with a total capital of 106.4 billion VND and has disbursed a capital of 92.5 billion VND through 03 banks: BIDV, Vietcombank and HDBank. Currently, the Fund focuses on developing and completing professional processes for the function of lending and financing for innovative start-up SMEs, SMEs joining industry clusters and value chains in accordance with the Decree. No. 39/2019/ND-CP. The Fund is expected to start lending and financing activities from the 4th quarter of 2019.

In addition, to continue promoting the spirit of start-up and innovation, the Ministry of Planning and Investment has chaired and coordinated with ministries, sectors, localities and the business community to organize the Program of connecting 2018 Vietnam Innovation Network. In addition, the Project on establishment of the National Innovation Center has been submitted to the Prime Minister by the Ministry of Planning and Investment. The center will soon be established and put into operation in the near future. The Ministry of Science and Technology continues to carry out activities under the Project "Supporting National Innovative Start-up Ecosystem until 2025" (Project 844). The Ministry of Education and Training, the Ministry of Labor, War Invalids and Social Affairs and related agencies are speeding up the implementation of Decision No. 1665/QĐ-TTg dated 30/10/2017 on approval of the

Project "Supporting Student Start-Up until 2025" Many localities have developed separate support plans for SMEs to start their own businesses (Ninh Binh, Vung Tau, Hung Yen, Ha Tinh, Hanoi, Can Tho, Binh Phuoc, Thua Thien Hue...).

## 2. Challenges of IR 4.0 for SMEs

*Firstly, the preparation for IR 4.0 of Vietnamese SMEs is weak*

The survey results of 2,000 enterprises belonging to Hanoi SME Association showed that up to 79% of the respondents did not prepare for the IR 4.0; 55% of enterprises were exploring and researching; 19% of enterprises made a plan and only 12% of enterprises were implementing measures to adapt to IR 4.0. Although technical infrastructure and application of information technology in industry and trade enterprises have been focused, they have not guaranteed to meet the readiness of this IR 4.0. That is not to mention the challenges stemming from the internal weaknesses of enterprises in the industry and trade sector (Hieu Minh, 2018).

The Report "Digital Development Index of SMEs in Asia-Pacific" of Cisco carried out on 1,340 enterprises in the region in general and 50 Vietnamese enterprises in particular showed that more than 60% of SMEs in the Asia-Pacific region have started to digitize thanks to the improvement of internet access and increase of smartphone ownership. They were redefining customers' experiences and expectations, changing the way they operate, while still well grasping sources of investment and promoting new opportunities. However, according to the report, in Vietnam, SMEs are facing barriers in the digital transformation process, such as: lack of digital skills and human resources (17%); lack of strong enough information technology platform to enable digital transformation (16.7%); lack of digital thinking or challenges in digital culture in enterprises (15.7%)...

*Secondly, the business environment is not as expected*

The State's policy is to untie the business environment, but the implementation of policies

at the grassroots level is not as effective as expected by the enterprise community. Although there are many incentive and support policies, most of these policies have not been effectively implemented in practice. For example, the time for establishment of an enterprise has been greatly shortened, but in reality it is still quite a long time, petty corruption is still widespread, and informal costs are high. Besides, the support policies on tax and start-up are still not specific and not yet effectively implemented in practice.

The fact that business environment is not really open and policies have not been effective are also the main reason why the number of enterprises ceasing operations and dissolution is very large. Specifically, in 2018, the National Database on Enterprise Registration recorded that 63,525 enterprises ceased operation without registration or were waiting for dissolution. In which: 44,730 enterprises ceased operation without registration and 18,795 enterprises were waiting for dissolution. Also in 2018, the whole country had 16,314 enterprises completing dissolution procedures, an increase of 34.7% compared to 2017. Thus, on average, in the period of 2016-2018, the whole country had 13,635 enterprises completing dissolution procedures, an increase of 43.5% compared to the average number of enterprises dissolved in the period of 2014-2015 (Ministry of Planning and Investment, 2019).

In the first quarter of 2019, the total number of enterprises ceasing operation and dissolution still increased, reaching 34,208 enterprises, equaling 120% of newly registered enterprises in the same period.

*Thirdly, the technological level of SMEs is still low*

Updating new technology trends, changing the way of corporate governance is a key issue that determines the existence and development of SMEs in the era of IR 4.0. However, in Vietnam so far, many enterprises, mostly SMEs, are still struggling with technology equipment and machines that are outdated for 2-3 generations.

Outdated technology and slow innovation limit

production capacity, diversify products, limit productivity, output, product quality, increase production costs, negatively affect the production and business results of enterprises, even affect the environment.

In addition, many SMEs are still hesitant to access and apply 4.0 technology upgrades due to many reasons, such as lack of capital, lack of access to modern technologies and lack of awareness and understanding of related strategies.

#### *Fourthly, SMEs lack high quality labor*

The development of SMEs is often unstable and vulnerable. One of the causes of this situation is that the labor force in SMEs is currently very lacking and weak. Meanwhile, the quality of human resources is a key factor determining the development of enterprises in the context of IR 4.0

### **3. Solutions**

In order to help SMEs develop in the context of IR 4.0, it is important to consider the following measures:

*Firstly*, the State needs to create policies to encourage and create favorable conditions for businesses in general, SMEs in particular to take advantage of the opportunities provided by the digital economy, namely:

- The problem of enterprises in general and SMEs in particular is that they only need to have a favorable business environment, do not face many legal and policy barriers, with support and facilitation from the State. The State needs to put them at the center of the national innovation system; continue making efforts to build a Government creating development, serving people and enterprise, ensure the freedom of doing business and endeavor to create an equal and favorable business environment for enterprises.

The supporting policies for SMEs in IR 4.0 give priority to digitalization. Digitalization is a prerequisite step for SMEs to take advantage of the technological advantages of IR 4.0 Therefore, policy makers in Vietnam should encourage SMEs to strategically collect relevant data that can create

value for analytical process of the enterprises. Once these strategic data are available, SMEs can improve their sales capabilities and identify target markets, as well as change business models and enhance competitiveness.

- The Government should have independent support programs on artificial intelligence and data analysis to encourage more SMEs to upgrade data to analyze useful knowledge to transform businesses.

- Eliminate thinking of forbid if unmanaged, passive thinking before the new business types appearing.

- Urgently renovate the field of education, training and vocational training in the direction of international integration, creating and supplementing to develop human resources with appropriate skills, being capable of acquiring and mastering technologies in the period of IR 4.0.

The Government can create incentive mechanisms, enhance capacity for business specializing in providing and supporting local SMEs to apply new technology solutions. In order to create incentives to apply new technologies, it is necessary to create success stories at the very locality, because success stories at the very locality will shorten the learning process, inspire other SMEs to upgrade technology to transform businesses.

*Secondly*, build and support to enhance the integration capacity to receive IR 4.0 for enterprises in general and SMEs in particular through the following activities:

Construction of modern infrastructure: Information technology infrastructure, telecommunications technology and the Internet are the 3 prerequisites to ensure appropriate services for e-commerce development. At the same time, build electronic technology infrastructure to create electronic - informatics - telecommunication devices.

- Enhance information of propaganda, raise awareness for whole society, especially the SME community, about opportunities, challenges and inevitable trends of IR 4.0.

- Focus on training and developing high-tech resources. Enhance the training of informatics experts and popularize knowledge on e-commerce not only for enterprises, state management officials but also people.

- Develop public services for e-commerce, such as: electronic customs, tax declaration and payment, import and export procedures; business registration and specialized licenses in relation to online trade, dispute resolution, ... State agencies must apply e-commerce in public procurement and bidding; associated with administrative reform, transparency, enhancing the effectiveness of national administration and building e-government.

- Capacity and awareness building training programs for SMEs need to be highly realistic. Education and awareness raising programs should not only be based on theory or textbooks, but should be taught by real-world practitioners, corresponding with various levels of SMEs (newly joined businesses, experienced or highly qualified businesses). Consulting and training programs need to be implemented in a diversified and flexible manner depending on the subjects but not a good approach for all businesses.

#### *On the SME side*

In the context of the digital economy, with new innovation based on advanced technology, it is necessary to recognize this as an inevitable trend, a core element for competition and development. This leads to the business strategy of each business in general, SMEs in particular, to change flexibly. Accordingly, the following issues should be focused on.

- It is needed to proactively develop a plan of production and business activities according to its

capabilities and operation fields; improve technology in the direction of using digital technology to raise production and business efficiency; raise awareness of the role of e-commerce business in the context of international economic integration and economic development trend, towards building an effective E-commerce business model.

- The SMEs must change short-term fragmented business minds and gradually build long-term vision, strategy and business plan.

- In addition to investing in and upgrading core technologies, investing in and applying modern and advanced technologies, using large data warehouses to help analyze and process customer data and cloud applications. The enterprises need to focus on strengthening technology management capacity, creating a foundation for strongly developing modern and effective products and services.

Promote the development of digital production and business solutions; integration with sensor systems, control systems, communication networks for business and customer care; efficient storage and use of big data based on cloud computing; collect, analyze and process big data to create new knowledge, support decision making and create competitive advantage.

- Attach importance to "enterprise restructuring" in the spirit of entrepreneurship, innovation and creativity; review and update in order to timely adjust and renovate the corporate governance model suitable to its development scale in each period; build a streamlined and efficient apparatus, and arrange the right workforce with the right people to ensure the highest labor productivity" ■

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## PHÁT TRIỂN DNNVV VIỆT NAM TRONG BỐI CẢNH CÁCH MẠNG CÔNG NGHIỆP 4.0

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### **TÓM TẮT:**

Cuộc cách mạng công nghiệp 4.0 với sự hình thành và phát triển của các công nghệ mới, đã tạo ra những thay đổi sâu sắc cho hoạt động sản xuất - kinh doanh, định hình lại hệ thống sản xuất, tiêu thụ, vận chuyển và giao hàng cũng như tạo ra các mô hình kinh doanh mới. Cách mạng công nghiệp 4.0 mang đến cho các doanh nghiệp Việt Nam nói chung, các doanh nghiệp vừa và nhỏ nói riêng, những cơ hội và thách thức cụ thể. Do đó, để phát triển, các doanh nghiệp vừa và nhỏ ở Việt Nam cần định hình lại bản thân và chuẩn bị tinh thần đón "cơn gió" của Cách mạng công nghiệp 4.0.

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