

Sustainable Business in Vietnam: Understanding from the Industrial Revolution 4.0 to Business Creative Innovation Capacity

Le Ngoc Thong*

National Economics University, Vietnam

*Corresponding Author: *Le Ngoc Thong, National Economics University, Vietnam*

Abstract: *By using a combination of theoretical research methods, documentary research, analysis - synthesis; history - logic; sociological investigation; interview; ..., the essay explores the general theories of the industrial revolution 4.0, the capacity for innovation and the innovation of the enterprise, the sustainable business and the relationship between the problems this. From this, the article goes into the analysis and relate to the reality of the subject and the content of enterprise innovation capacity in the context of industrial revolution 4.0 to serve the business of sustainable business. Finally, the paper proposes some suggestions to help businesses develop their capacity for innovation and sustainable business in Vietnam.*

Keywords: *Business; Capacity for Innovation; Industrial Revolution, Innovation; Sustainable Business*

1. INTRODUCTION

In the context of industrial revolution 4.0, creative innovation is important meaning for enterprises as an indispensable for existence and sustainable business of the business. In fact, enterprises have set goals for sustainable business. But the results are not satisfactory, damage to enterprises and the whole country. Finding and implementing the current sustainable business solution as a heavy and glorious responsibility of the enterprises. First of all, identify and proactively interfere with the impact from industrial revolution 4.0 comprehensive capacity and creative innovation capacity of business

2. RESEARCH OBJECTIVE AND METHOD

The objective of the essay is to further clarify the theory about industrial revolution 4.0, creative innovation capacity of business and the creative innovation, sustainable business of the enterprises and the relationship between these issues. In particular, learn thoroughly about the subject and content of the creative innovation capacity of business, as a determining factor for the career of the sustainable business of the enterprises. From that, propose a few suggestions for the development of creative innovation capacity of business, for sustainable business of enterprises

The essay uses a combination of methods: analysis - synthesis; history - logic; study materials; social investigation and interview...

3. RESEARCH RESULT

3.1. Theory about the Relationship between Industrial Revolution 4.0 and the Sustainable Business Issue of the Enterprises

3.1.1. Theory about Industrial Revolution 4.0

Currently there are many comments on this issue, should be agreed at the following points: industrial revolution 4.0 takes place in 3 main areas including Biotechnology, Digital and Physics. The core elements of digital in industrial revolution 4.0, according to Mr. Pham The Truong (2018)¹, are models A - B - C - D - I. In which, AI: artificial intelligence; Big Data, Cloud Computing; Digital Transformation; and Internet of Things

Industrial revolution 4.0 is taking place in developed countries in Europe, America, part of Asia. Since then there have appeared many new opportunities, and many challenges that cause inequalities, can break the labor market. Starting from office workers, intellectuals, technical workers, and then

¹Mr. Pham The Truong: the General Director of Microsoft Vietnam

cheap labor. All require enterprises to change; leading to economic instability. Industrial revolution 4.0 only will lead to instability in life and political instability. That is the existence, unsustainable social development, is the unevenness, and seems to upset the value system of life, human value system, with global scope. The results of technical revolution, the way of communication on the Internet also put people in a lot of danger in finance, health, and confidentiality secrets. Focusing on challenges, social activity requirements, business processes must be approached in a sustainable way.

3.1.2. Theory about Sustainable Business

Sustainable development is “development that can meet current needs without compromising, damaging the ability to meet the needs of future generations...”²; ensuring economic and fair development for society and environmental protection.

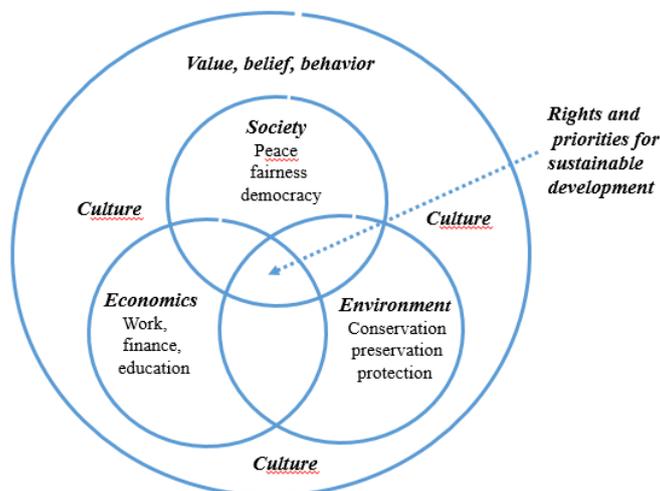


Figure 1. Sustainable development model³

Source: Research Center for Natural Resources and Environment, Hanoi National University

Maintaining and increasing equality between generations is considered a sustainable philosophy. The purpose of sustainable development, serving people, so that everyone is prosperous and not hungry; being access to advanced education and health. In order to do so, it is necessary to balance the issues of environment and simultaneous development at all operational establishments and be the responsibility of all social members.

Enterprises - economic entities have the mission of sustainable development, enterprise **sustainable business** - the orientation of social activities.

3.1.3. Sustainable Business

In business, sustainable development is both a requirement and a business opportunity. Ensuring the balance of three cores: economic-society-environment is an indispensable requirement for the enterprises community, to ensure the interests of shareholders and stakeholders. At that time, enterprises must solve many obligations and costly. At that time, enterprises carry out social responsibility, change technology more advanced, less harm to the environment, create benefits, business opportunities for enterprises in terms of capital and valuable contribution system, increase the value of stakeholders.

Sustainable business is the result of many responsibility moves:

- Doing business for sustainable development, detecting and interfering with the biggest impact on the company on risks as well as long-term opportunities

²Excerpted from The Our Common Future Report by the World Commission on Environment and Development - WCED is now Brundtland Committee.

³Truong Quang Hoc - Hoang Van Thang; “the path of sustainable development in the context of global transformation”, Posted on : <http://tapchimoitruong.vn/pages/article.aspx>

- Identifying and contributing to sustainable development in the world and in the country.
- Developing and implementing business models, new products and services that can be adjusted, transformed or rearranged in the supply chain.

To do so, enterprises based on two premises are also the main driving force for the development and sustainable business of enterprises: moral qualities and creative innovation capacity of business

3.2. Creative Innovation Capacity of Business

3.2.1. The Process of Creative Innovation of Enterprises

Creative innovation of the enterprises is the process of developing new products, services, processes or management systems, forming and adjusting new relationships to meet the new requirements of the business process of society.

Process of creative innovation:

<i>Research → planning → seeking technical solutions → commercialization</i>
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a) The Result

Turning an invention into a new product or service approved by the market (realizing value), the enterprises gain profit (in consideration of three basic competitive factors: price, quality and service)

In summary, creative innovation is a process that begins with an idea and ends with the successful commercial market implementation.

Creative ideas often appear due to market competition needs, coming from inside or outside the enterprise. At that time, enterprises must solve the problem of balance and optimal between resources of enterprises and competitors.

Currently, business under industrial revolution 4.0 conditions and government intervention, sponsorship and support to the competitors. Therefore, creative innovation hides a lot of risks with two directions of creative innovation strategy: (i) Enterprise builds knowledge and competences that are superior to competitors from using technology or customer links - so-called industrial revolution 4.0 surfing - (ii) Create legal barriers with potential competitors based on new technologies and maximizing profits - so-called paving, wave separation.

According to Schumpeter (1934)⁴, creative innovation in enterprises consists of 5 contents: (i) providing new products or improving existing product quality; (ii) implementing new methods, processes and materials; (iii) seeking and developing new markets; (iv) creating and developing new supply sources; (v) organizational renewing

With OECD (2005), creative innovation is attributed to two main directions⁵: (i) creative innovation of products and services (with more advanced functions and prices); (ii) creative innovation on how to create and implement product value. Either way, if you want creative innovation, enterprises need to invest (broad sense) very big in capital and R&D

Creative innovation does not stop at research, inventing new products, but must aim to exploit the biggest demand in the market. Creative innovation enterprises is expressed through continuous creation of new value to attract customers to consume goods, use more and more services, willing to pay higher prices.

Way to measure the effectiveness of creative innovation: (i) through revenue from products and services; (ii) the number of inventions, but an invention is the result of many years of investment in R&D. Remarks: Not only based on revenue or profit from new products to evaluate creative innovation capacity of business, New products are only at the beginning stage of the product life cycle.

Creative innovation needs to comply with the consistent principle of finding ways and solutions to exploit the minimum resources to meet social needs to the utmost.

⁴Shumpeter, J. (1934), *The Theory of Economic Development*, Harvard University Press.

⁵OECD (2005), *Manuel d'Oslo*.

b) *The Governed Factors to the Creative Innovation of Enterprises in Fact, There are Many Factors in Relation to the Model:*

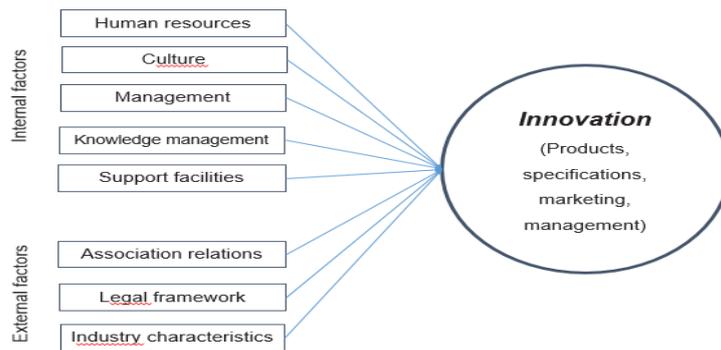


Figure2. The governed factors to the creative innovation of enterprises ⁶

Source: Compiled from Romijn & Albaladejo (2002); Wan & et al.(2005); Darroch(2005); Schulze & Hoegl (2008); Nguyen QuocDuy (2015)

In which, human being is the main factor - the subject of creative innovation + enterprises with flexible and organic organizational structure + training and development of personnel + corporate culture + The necessity of creative innovation of enterprises’

In the current global competitive context, enterprises are dealing with selection for creative innovation, research for development or bankruptcy.

c) *Creative innovation lines*

Creative innovation is done in many ways:

International cooperation with countries, enterprises and international organizations with advanced science and technology to replace outdated technology. The Vietnam - Finland creative innovation Partnership Program (IPP) was implemented from August 2009 - February 2014 with the Finnish Government's non-refundable support, through IPP. Results: building a system of science and technology policies including the Law on Science and Technology and other development policies, while supporting a number of scientific and technological organizations, research institutes and universities in Vietnam Nam conducts innovation and puts research results into production and business

Removing policy bottlenecks

Unreasonable policies of the State, troublesome administrative procedures; bureaucracy of the bureaucracy. The state has not created an environment that combines market and science and technology. As a result, many good and excellent projects and projects are not used, enterprises lack solutions and new technologies. Therefore, it is necessary to have many and many policies to support enterprises to innovate and innovate through the National Science and Technology Innovation Fund, the National Product Program, the venture capital fund ... to form recovery resources. innovation, deployment of scientific and technological advances in production and business.

3.2.2. Creative Innovation Capacity of Business

a) *Asserted Premises*

- Creative innovation capacity of business is the ability to implement creative innovation in enterprises.
- Creative innovation capacity of business is a requirement as well as a necessity for the existence of the enterprises

b) *The Origin of Creative Innovation Capacity of Business*

It is the product of unity between objective factors and subjective factors in enterprises towards enterprise creative innovation. Here, objective factors play a decisive role in the content of the

⁶ According to Tran ThiHong Viet (2016), “Factors affecting the creative innovation capacity of Hanoi shoes leather enterprises”, Digital Economic Management Journal Vol.74 (1+2/2016)

creative innovation capacity of business; through subjective prism (part of the subject) will form the creative innovation capability of the nature, objectives and objects of service. The relationship between these elements is shown by the following model:

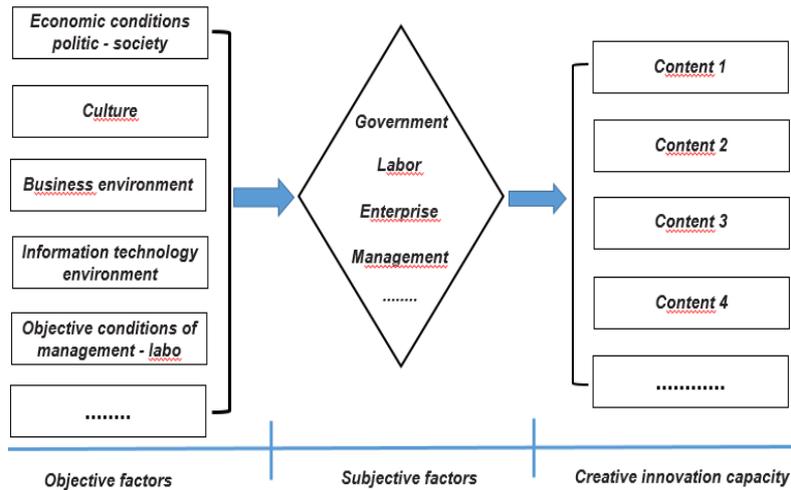


Figure3. Origin of forming creative innovation capacity of business

Source: By the author

c) The Constituent Elements of Creative Innovation Capacity of Business

Creative innovation capacity of business includes many elements, each of them has its own role.

- According to the method of implementation, the creative innovation capacity of business includes 2: creative innovation capacity in awareness and creative innovation capacity in practical business activities of enterprises.
- Based on the manifestation, the creative innovation capacity of business consists of 5 components: (i) The ability to create differences in products and services with potential to bring outstanding profits as well as market adaptability, (ii) The ability to implement the interest of leaders, and the ability to capture and process information, and invest in creative innovation of members in the enterprise, (iii) Ability to invest resources for creative innovation, (iv) The ability to create a creative atmosphere in enterprise, enterprise’s members support and boldly take initiatives, respect and support the implementation of proposals and have clear rules to support creativity. , (v) Research and development capabilities (R&D)

Since then, form a framework of creative innovation capacity of business under the following model:

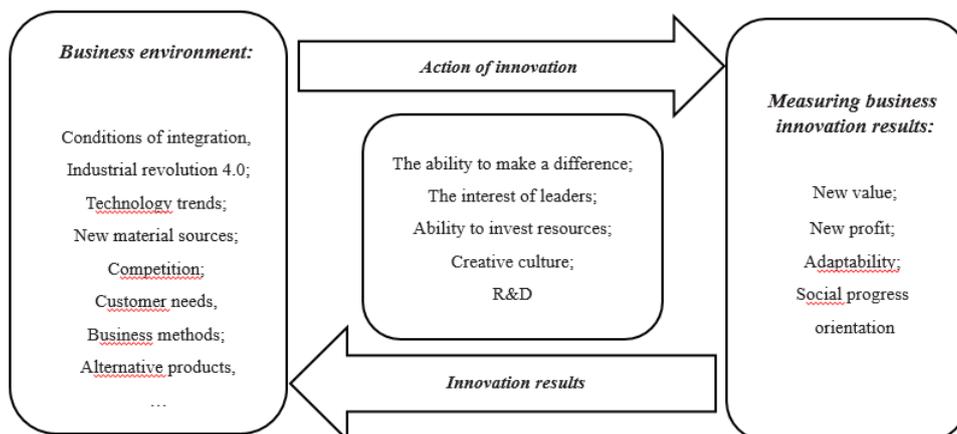


Figure4. Creative innovation capacity of business framework

Source: By the author

These contents, can be consensus or mutual, depending on their direct conditions, but ultimately, they impact and enhance the employee's capacity. Some common manifestations: new products are always

difficult to meet market demand and potential risks, including the possibility of failure; have technical solutions to create new products, but that product is accepted by most customers; ... Therefore, it is necessary to combine creative results from adaptive capacity to R&D to fully define innovative solutions and projects. Having a solution, the project is only the first step, the important is the determination to invest resources to implement. It is necessary to analyze the relationship between the components together to integrate into the most core innovation programs, avoiding spreading investment, dispersing resources. At the same time, it is necessary to determine a reasonable time to announce the results of innovation. When the revenue of traditional products slows down, the demand for new products of customers is clear, it is the right time to launch new products.

3.2.3. The Subject of Creative Innovation Capacity of Business

Based on the points analyzed above, the capacity of the human spirit, the subject of capacity is human. Therefore, the subject of creative innovation capacity of business is a collection of members participating in the enterprise: managers and workers.

a. The relationship between leaders - managers and creative innovation capacity of business. Leadership - management plays an extremely important role in the success of the business: setting goals, business strategies; gather and promote enterprise resources to achieve the goal of enterprise creative innovation.

With the leadership - management department, Richard L. Hughes et al. (2000) told about creative competence with the concept of “creative intelligence” - belonging to six blocks of competences, leadership skills⁷.

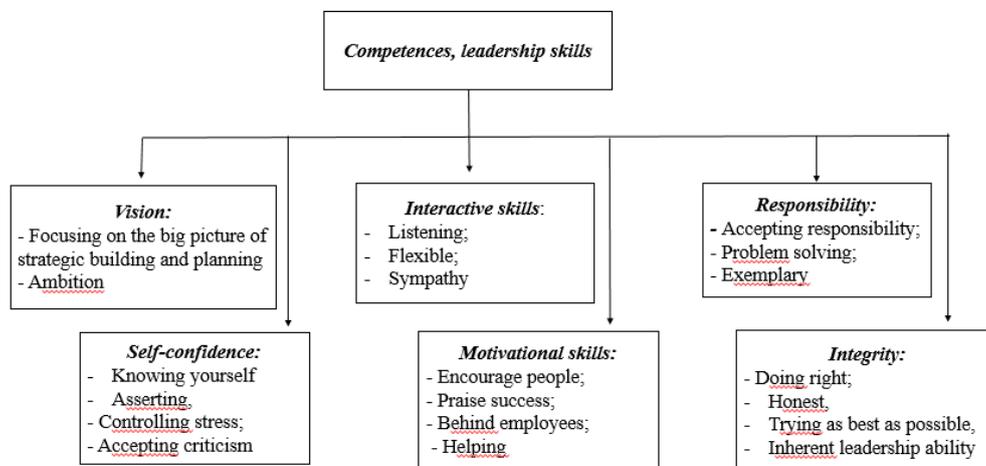


Figure5. Competences, leadership skills

Source: By the author

In which, having creative innovation capacity of business is a unified association from many factors, which is shown in the following model:

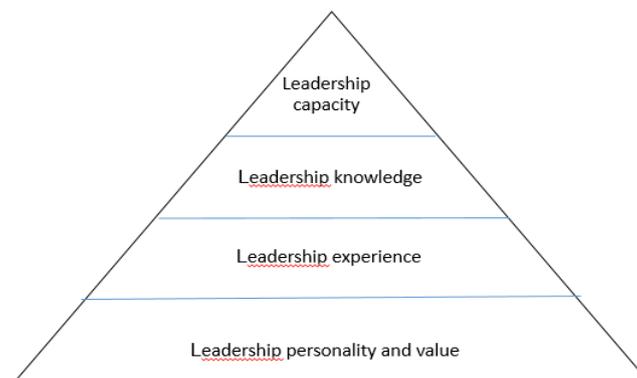


Figure6. Creative innovation capacity of leaders - business management

Source: By the author

⁷ Excerpted Translation of Richard L. Hughes (2000) posted on: www.askmen.com

So, creative innovation capacity of business is considered in relation to creative people and creative society. In the context of industrial revolution4.0, requires members of the enterprise to be able to perceive and act on the trend of the revolution. According to Pham The Truong (2018)⁸, industrial revolution4.0is existing in daily life and business and management. If you do not want to leave behind, businesses need to grasp the characteristics soon, also the preeminent points of industrial revolution4.0.

b. Relationship between creative innovation capacity of business and employees - Promoting creative capacity of workers⁹11. Labor in the enterprise is very diverse in terms of professional and cultural skills. According to Van de Ven (1986), the creativity of workers has a great effect on promoting the success of businesses. Their creative behavior is an element of innovation; According to Amabile (1988), personal creativity is when individuals (or groups) arise new or useful ideas or propose new mechanisms and processes to perform tasks, or identify products. products and services to better meet the needs of customers.

Creativity is related to an inherent enterprise attribute - interactive attribute.

In particular, the creativity of employees is the foundation for the company's efforts to innovate businesses. Scott & Bruce (1994) said that innovation behavior has a process:

Identify arising problems → forming new and useful ideas or solutions → prepare resources and plan implementation → Application ideas into practice. That is shown in the following model:

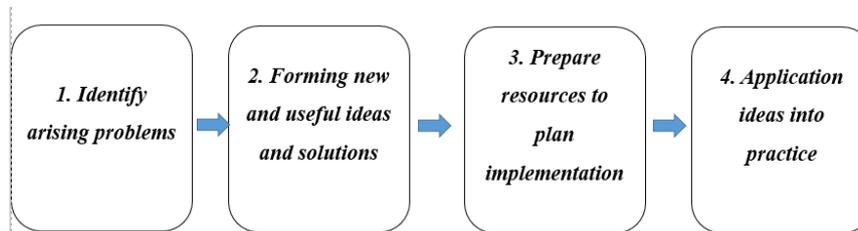


Figure7. The tip of creative innovation capacity of business

Source: By the author

In service, employee innovation behavior is the result of interaction with customers (Michael et al., 2011). Individual creative capacity is manifested richly: the ability to learn and improve the career and psychological capital; ...

So, employee creativity is the key to make creative innovation in the enterprise. In relation to other components in the enterprise, employees' creative innovation capacity only turns into reality and how realistic is it, which needs to take place through interaction with management - management. In other words, the leader - manager is the impact factor and the premise, the conditions for forming and implementing the innovation capacity of workers. That is shown by the following model:

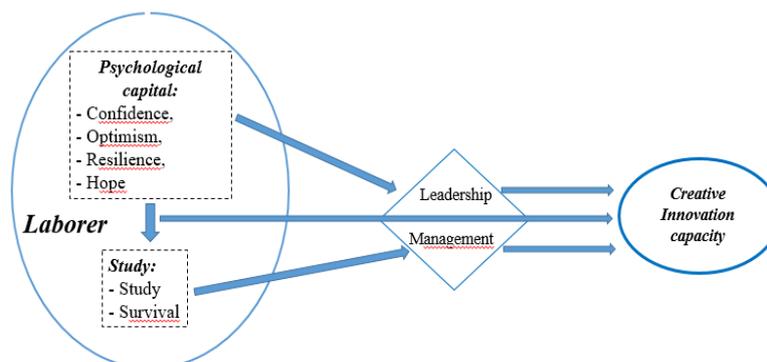


Figure8. Creative capacity of employees

Source: By the author

⁸Mr. Pham The Truong: General Director of Microsoft Vietnam

⁹Based on some contents of MSc. Pham Hong Liem (Faculty of Tourism, KhanhHoa University), “Promoting creative capacity of employees”

Thus, employees are a key factor for success in the development strategy and SB of enterprises. The above model reflects on the creativity of workers in connection with psychological capital and the role of learning in the work of employees and with the intervention of leaders - managers.

Actual reference on creative innovation of Vietnamese enterprises

3.3.1. The reality of influencing factors governing the creative innovation process of Vietnamese enterprises

In the process of industrialization and modernization of the country, enterprises have made great efforts to promote their own strengths and use the advantages of the situation through controlling factors to enhance CICOB as a prerequisite condition for the existence and prosperity of the business. With internal factors, some businesses have not really paid attention to the innovation policy. Nearly $\frac{3}{4}$ of businesses surveyed do not have human resources policies for creative innovation and financial investment policies for creative innovation; “Nearly 80% have no policy to cooperate and develop partners serving for creative innovation”¹⁰. On the other hand, many have little interest or no proper method to identify creative innovation capacity when recruiting and attracting external resources for that process. The proportion of enterprises with R&D department is quite modest.

Particularly for cultural factors, some Vietnamese enterprises have not created a foundation and operating environment for creative innovation. More than 50% of businesses admitted at the level¹¹. “Promoting the creative capacity of workers to lie with mistakes and failures in innovation. Up to 65% of businesses have not facilitated the sharing of knowledge and promotion of learning culture”¹².

3.3. Results of Creative Innovation of Vietnamese Enterprises

In fact, the results of creative innovation of Vietnamese enterprises are very encouraging. Enterprises tend to expand their markets, of which about 70% have offered new products to customers with modest results. Improved products brought about 11-20% of revenue for most businesses. This shows the success of creative innovation. In particular, the field of biotechnology and construction materials, environmental technology has revenue from the largest new products¹³. Meanwhile, the number of inventions of Vietnamese enterprises is not commensurate with the existing potential.

4. DISCUSSIONS AND SUGGESTIONS

4.1. Discussion

From the results of the study, it shows the close relationship between the creative innovation capacity of business and the policy towards improving the quality of human resources, creative innovation capacity of business.

- Human resource management should be strengthened, particularly the function of training and developing human resources. First of all, impact on psychological capital and training through and through the manufacturing process. On the other hand, all capacities of the people depend heavily on the culture of the environment in which they live and work. Therefore, enterprises should create a cultural environment in sharing knowledge, learning opportunities for employees and establishing positive relationships, creating excitement in labor.
- Leaders - business managers exist in relationships with employees. Therefore, attention to individual psychological factors is an essential requirement to form, nurture, develop, and evaluate members in the enterprise. At the same time, building a suitable business-oriented business environment, meeting industrial revolution 4.0 requirements, will include a working environment geared towards employees. The overall business and departmental environment corresponding to each individual employee must demonstrate the pros and cons of the 4.0 technology wave with specific characteristics.

¹⁰According to Phung Xuan Nha, Le Quan, “Creative Innovation of Vietnamese enterprises”, Journal of Science VNU, Economics and Business, Vol 29, No.4 (2013) 1-11 6

¹¹According to MSc. Pham Hong Liem (Faculty of Tourism, KhanhHoa University), “Promoting the creative capacity of employees”

¹²As 11

¹³As 11

4.2. Suggestions for Developing Creative Innovation Capacity of Business

Creative innovation capacity of business has a key content that is the ability to manage and manage resources in conformity and use of the results of industrial revolution 4.0. Therefore, should it be:

4.2.1. Using Enterprise Resource Management Software ERP (Enterprise Resource Planning)

ERP is a corporate governance model based on an analysis of the overall system of resources of enterprises, helping operators to manage and use those resources to the maximum effect. The resources of the enterprise include: human resources, finance, equipment, technology and production processes, information, customers and suppliers, if attributed to the accounting object, then that includes: equity and loans.

The inevitability of specialized production and ERP implementation. ERP system performs the following functions: (i) Integrating financial information to create a single common system among business units throughout the enterprise; (ii) Integrating information about orders: orders in many connected areas, (iii) Standardize and improve and automate production processes and methods to save time and lift high labor productivity; (iv) ERP reduces invoices to help users plan better product distribution; (v) Standardize personnel information to help manage human resources effectively and economically.

These advanced functions and the role of information technology have not been effectively enforced in the national economy. In fact, there has been the failure of information technology projects, due to errors in implementation, making the new information technology system not penetrate into the operation of the enterprise. Therefore, creative innovation needs to invest in ERP research and deployment.

A few notes about the theory of ERP implementation in Vietnam. Participating in ERP deployment of the following components:

- PM firm- Software vendor and create ERP products (eg Oracle, Exact, SAP)...
- Distribution system of ERP products for PM firms, research requirements, actual customer status and ERP advice
- Implementer, directly implement ERP for customers and provide support services after deployment. They have close relation and are subject to inspection with PM.

The current world trend is specialization (symbiosis) between PM and VAR firms. PM firms (industrial capitalists) focus on product development and fully rely on VAR (commercial capitalist) to keep abreast and offer appropriate solutions to customers. VAR does not need to invest in ERP development but focuses on implementing consulting, selection, deployment, training, support and fire protection services from PM firm.

The situation of ERP distribution and deployment in Vietnam has lagged far behind in the organization, distribution and deployment of ERP with a small service value (from a few thousand to a few million dollars - according to CEO - PCW B in November / 2003). no ERP software company has built a strong and professional VAR system. Vietnamese PM firms are heavy in self-sufficiency, within a narrow range.

4.2.2. Developing the Capacity of Technology Innovation in Enterprises: Benefits and Barriers¹⁴.

This is the leading solution to help businesses improve productivity, efficiency, competitiveness, and create a sustainable position in the market. Many businesses are successful thanks to technology: Vietnam Dairy Products Joint Stock Company; An Giang Plant Protection Joint Stock Company; QuangVinh Ceramics Company Limited (QuangNinh); ... But in Vietnam, the technology level is quite advanced mainly from foreign invested enterprises. Domestic enterprises have backward technology;

Investment in technology innovation is very low (about 0.4% of annual revenue) mainly due to lack of financial resources and small scale.

¹⁴According to <http://tapchitaichinh.vn/tai-chinh-kinh-doanh/tai-chinh-doanh-nghiep/doi-moi-cong-nghedoanh-nghiep-song-hanh-loi-ich-va-rao-can-73207.html> Posted on: 04/12/2015

On the State side, the policies related to promoting science and technology activities have so far basically impacted in the direction of encouragement without the requirements or sanctions force enterprises to devote resources for research and technological innovation.

Domestic science and technology organizations only meet a small part of the technology needs of enterprises. In order to support enterprises in technology renovation, it is necessary to abolish the mechanism of applying - giving, renewing the process of approval, selection and issuance of flexible financial mechanisms in research and application activities.

Developing creative innovation capacity of business through innovating operating methods, renewing business strategies. Actual activities of businesses, so investing in manufacturing instead of real estate, should increase funds to support businesses. At the same time, building and improving the state support regime for enterprises to develop creative innovation capacity.

Actively build a corporate culture for the development of creative innovation capacity of business. Which really focuses on creative strategic elements and corporate policies for brave members of creative innovation, on the motto of respect and high requirements for people.

5. CONCLUSION

From the impact of industrial revolution 4.0, the existing product block, the flow of business relations has gone through many of their lifecycle, gradually falling into a state of degradation, the risk of potential loss of sustainability. All improvements are no longer working, cannot save the situation; only new product innovation, new relationships to replace old items can help enterprises survive, contributing to maintaining social progress. That process, only effective when done in the corresponding capacity. Development of employees is an inevitable sustainable development and sustainable business.

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AUTHORS' BIOGRAPHY



Le Ngoc Thong is currently working in Political Theory Department, National Economics University, Vietnam. His research area is focuses on Philosophy, Economy and Education

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