
**IMPACTS OF THE FOURTH INDUSTRIAL REVOLUTION ON VIETNAM FROM
THE PERSPECTIVE OF HUMAN EXISTENCE**

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ABSTRACT

In this article, we analyze some typical impacts of the fourth industrial revolution on Vietnam from the perspective of human existence (including the biological, social and spiritual aspects).

Key Words: Industrial Revolution, The Fourth Industrial Revolution, Human Existence, Vietnam.

1. INTRODUCTION

It can be said that Vietnam is in the early stages of the fourth industrial revolution. In Resolution No. 52-NQ/TW of the Politburo, the content affirms the achievements of the Party and the State of Vietnam in leading and directing at all levels and branches to promote the application and development of science, technology and innovation, research in order to grasp, improve capacity to approach and actively participate in the fourth industrial revolution. However, the Resolution also clearly states that Vietnam's existing problems in this revolution are the low level of initiative; institutions and policies still have many limitations and shortcomings. Through the Directives and Resolutions of the Party and State of Vietnam in the past time, it can be affirmed that the fourth industrial revolution has been having more or less influence on Vietnamese society in general and Vietnamese people in particular.

From the perspective of human existence, the fourth industrial revolution is showing a small but profound impact on Vietnamese society. On the other hand, because the fourth industrial revolution in Vietnam is only in its early stages, its future impacts on Vietnamese society are also issues that need to be forecasted soon to have timely response solutions in order to both promote the positive impacts and minimize the negative impacts of this revolution.

1.1. In terms of biological aspect

Technological advances in the fourth industrial revolution have been widely applied in agricultural production in Vietnam, especially the combination of biotechnology with genetic technology to create new plant varieties that have better adaptability to drought, saline water or pests.

These achievements promise to bring high-yield, good-quality products that are beneficial to human health. However, scientists themselves are not sure about the safety of these products for human health and the ecological environment in the future. That is really a problem that requires the agricultural industry in particular and the whole society to pay attention to have appropriate orientations and solutions to ensure a future of sustainable development towards a product system that is not only highly productive, environmentally friendly, but also good for human health in the long run.

In addition, other advanced technologies such as genetic technology, 3D printing technology... have also been applied in the medical industry in Vietnam for a long time. It has been a remarkable achievement of our country's health during the third industrial revolution to the present. Typically, Vietnam has gradually self-produced vaccines for national expanded immunization programs, replaced and applied new technologies in vaccine production, and has now produced 11 vaccines for the expanded immunization program. The application of new techniques in testing and determining the causes of diseases (molecular medicine, gene technology, PCR, DNA resolution ...) into testing and testing food hygiene and safety, health environment was also performed. Moreover, the application of information technology in infectious disease surveillance and control, the use of data management and processing software by programs in the field of preventive medicine; robotic surgery applications..have been implemented in a number of large hospitals such as National Children's Hospital, Vietnam - Germany Hospital, Vi Dan Hospital (Ho Chi Minh City)...; application of gene and stem cell technology to the diagnosis and treatment of diseases, including: blood cancer, lymphoma, marrow cancer...or in the treatment of regenerative medicine and some genetic diseases such as stem cell transplant... [See 1; pp.345-346].

These new technology applications continue to be added and developed in Vietnam's health industry in the context of the world entering the fourth industrial revolution. Experts also said that, in the general development trend, Vietnam's health industry must also apply automation technology, artificial intelligence, Internet of things, etc. to medical examination, treatment, and pharmaceutical production and biological products and the management of medical facilities. However, the application of those technological achievements, besides the advantage of creating great opportunities to improve the efficiency of medical examination and treatment, to improve life expectancy and health for Vietnamese people, the health sector must also face challenges such as: patient information leakage; the remote health care and monitoring systems can also cause inconvenience to doctors and patients. In addition, the issue of social values, medical ethics cannot be underestimated.

Therefore, perhaps we also need to drastically raise the issue of scientific ethics in Vietnam in order to promptly respond to the negative impacts of technological advances in the fourth industrial revolution on society and people not only in the present but also in the future.

2. IN TERMS OF THE SOCIAL ASPECT

2.1.Impacts on production relations

In recent years, the Government of Vietnam is trying to create favorable conditions for organizations and businesses to apply digital technology to production in a variety of industries and occupations. As a result, we have achieved certain successes. One of the typical successes is the application of artificial intelligence in production and operation at Vinamilk. At the factories of this dairy enterprise, almost all operations are automated. RGV robots operate automatically to transfer the finished pallets to the smart warehouse area, transfer the packaging rolls and the packaging materials to fully automatic machines, which can self-charge batteries without the need for humans. The factory has very few workers, mainly self-operated robots, 100% automatic production lines.

Besides, the product “Knowledge-enabled Personalized Chatbot” (KBOT - virtual assistant) of High-Tech And Intelligence Software Development Joint Stock Company (Hitelli) is

Vietnam's first AI technology product to automatically ask and answer questions in many areas of life and society. In addition, some Vietnamese enterprises have also been applying IoT to their business processes such as: Viettel is researching the applications for traffic such as selling electronic tickets, monitoring the transport routes...; at Hoa Lac Hi-Tech Park, in July 2016, IoT Lab was established with the participation of Hoa Lac Hi-Tech Park, DTT Company, Intel Company and Dell Vietnam Company [See 3; p.215].

Although Resolution No. 52-NQ/TW of the Politburo pointed out our limitations in actively participating in the fourth industrial revolution, the efforts to apply advanced technologies to Vietnam's circumstances in order to achieve such initial achievements are remarkable. However, the modernization of means of production will put a part of workers in factories and enterprises at risk of losing their jobs. First, low-skilled workers, unskilled workers, will be replaced by production machines and robots.

Data from the General Statistics Office shows that the number of unemployed people in our country has tended to increase in recent years. Specifically, the unemployment rate of working-age workers in 2015 was 2.31% (it was 2.18% in 2013; it was 2.10% in 2014). In the first 6 months of 2016, the total number of unemployed people in Vietnam was 1.12 million people, accounting for about 2.23% [See 2; p.242]. These figures allow us to confirm that, in the near future, modern machinery will be the cause of a large number of workers falling into unemployment. Although many researchers around the world are optimistic that the fourth industrial revolution will create a lot of jobs in new industries, and the total number of jobs will not be reduced because hyper-automation and hyper-connectivity can enhance the productivity of existing jobs or create demand for the entirely new jobs.

That fact of the productive forces will cause the ownership relationship to change in the following direction: For ownership relations, there will be an upward shift of private enterprises and joint stock companies in the country's economy. Because, a digital economy with the construction of smart factories will require a large capital source, require the capital contribution of many small and medium private enterprises. For relations in management and organizations, a digital economy requires changes in the way of management and organization of the production process. At this time, the management relationship of the production process is not only reflected in the relationship between owners of means of production and workers as before, is but also a management relationship between people and machines, robots. This makes the operation in production more complicated. The product distribution relationship is still based on the relations in the ownership of the means of production. However, the share of distribution will be skewed towards those possessing advanced technologies.

Changes in production relations will also create profound consequences in Vietnamese society in the near future. It is the inequality in income among workers, among those who hold the right to own advanced technology and the rest. And these changes will continue to result in the disturbances in social life. In order to survive, Vietnamese workers at this time are forced to equip themselves with technical knowledge which is suitable for the strongly digitized and automated production.

Although the effects of the fourth industrial revolution on production relations in Vietnam have only just begun to manifest, they have not been profound. The characteristics of Vietnam's labor force makes us face many difficulties and challenges in this revolution. That is, Vietnam is a country with a large number of workers with low scientific and technical qualifications and very

few high-skilled workers. The current advantages of Vietnamese workers, which are abundant and young, can turn into a weakness in the era of the fourth industrial revolution. In addition, the organization and implementation of guidelines and policies on the science-technology development still lack of decisiveness, not high efficiency. Those inadequacies once again pose an urgent requirement for the Government of Vietnam to come up with appropriate policies to both promote the entire society to participate in the fourth industrial revolution, and thereby showing a deep interest in the adaptability of Vietnamese workers, so that they have the best conditions to equip them with skills and knowledge, and avoid falling into a passive and deadlocked position.

2.2. Impacts on human-to-human communication activities in current Vietnamese society

During the fourth industrial revolution, the Internet and the high-speed Internet continue to be the fundamental factors that transform communication in Vietnamese society. According to information on the portal of the Ministry of Information and Communications, the rate of Internet users in Vietnam is more than 60%, ranking 16th in the world. This percentage has tended to increase in recent years: In 2019, the population of Vietnam reached approximately 97 million people, of which the proportion of urban residents was 36%. Among that population, there were 64 million Internet users (66%), an increase of 28% compared to 2017. It is noteworthy that the average time Vietnamese people use the Internet/1 day is quite a lot. According to Vietnam Internet statistics in 2019, Vietnamese users spend an average of 6 hours 42 minutes a day participating in Internet-related activities. The report also mentions that Vietnamese users spend an average of 2 hours 32 minutes on social media, 2 hours 31 minutes watching online streams or videos, and 1 hour 11 minutes listening to music. 94% is the percentage of Internet users in Vietnam who use the Internet daily. And 6% is the percentage of Internet users at least once a week. The statistics reveal that Internet users in Vietnam do not separate from Internet-related activities for over a week [See 6].

That shows the dynamism of Vietnamese people in accessing new technologies, and it can be considered as our advantage in the strategy of making science and technology become the fundamental driving force of the process of industrialization and modernization of the country. Besides, the Internet has also been helping to effectively shorten the geographical distance in Vietnamese people's communication, but it is also the main reason why Vietnamese people today have little direct communication with each other; consequently, creating distance, indifference, and lack of understanding in the relationships that are considered the most intimate, but the most important relationship is family relationships.

Vietnam is a country located in the region with Asian mode of production, but under the long-term influence of Confucianism, community cohesion has become an important feature, strongly influencing relationships in community activities as well as in production. However, in recent years, the connection between people on the scale from family to society has become increasingly indifferent, cold, and emotionless. The direct cause of that psychosocial state is the fact that people increasingly limit direct communication with each other, rarely share with each other. The image, which has become popular in every space in the family as well as in society, is that almost all people make themselves dependent on modern technologies such as computers and smart phones for work, especially the hobby of communicating with the outside world (virtual world). The formation of virtual relationships has unintentionally made the distance among people in real life become more distant than any geographical distance - that is the distance of the heart.

Now, digital technology creeps into every corner of life, “robs” the precious moments of

family meals, creeps into each sleep, thus creating an invisible barrier with extremely strong destructive power. In recent years, the divorce rate of Vietnamese families has tended to increase. Although there are many reasons leading to that consequence, according to experts, one of the reasons of the era is the strong penetration of modern technology and the Internet into people's lives. Technology contributes to making people in the virtual world closer to each other, easy to share with each other, but it makes real relationships more and more distant from each other. Technology as an intervening "third" person makes insiders no longer have time to share and communicate with their partner, gradually leading to a lack of understanding, making relationships more fragile and easier to break.

Thus, the impact of technology in general and of the Internet in particular in human life is initially good. That is also the reason and purpose so that people create them. Because of the unreasonable intensity, scope, frequency and purpose of using these technologies in their daily lives makes the technological achievements themselves become indirectly the cause of negative consequences that people have been suffering. That situation requires Vietnam, when participating in the fourth industrial revolution, to have specific and timely solutions to orient consciousness and adjust human behavior in the use of new technological advances, to minimize the negative effects of technology in life, and at the same time, maximize its power in bringing a happier life.

3. IN TERMS OF THE SPIRITUAL ASPECT - IMPACTS ON THE CULTURAL IDENTITY OF VIETNAMESE PEOPLE AND NATION

The traditional value system of the Vietnamese people, given by cultural researchers, is quite rich. It can basically include typical values such as: The patriotic tradition, the spirit of national unity and community cohesion, the virtues of thrift, industriousness, the energy to overcome difficulties, creativity in combat and labor, the flexible behavior and the quick adaptation... Besides, there are other valuable values, such as the spirit of studiousness, respect for teachers, kindness and tolerance. In particular, the respect for the family and the sense of family preservation are a precious tradition that has existed for a long time along with the ups and downs of the nation. These spirits, which sometimes smolder, are sometimes fiercely strong, but are always a cross-cutting red thread, become an invisible force that creates the resounding victories of the Vietnamese people in national construction, preservation and development.

At the present time, although the war has receded, the fourth industrial revolution continues to pose new opportunities as well as new challenges to the cultural identity of the Vietnamese people. On the one hand, the fourth industrial revolution creates favorable conditions for enriching national cultural values, promoting the cultural "specialties" of the Vietnamese nation to international friends with the most modern and fastest digital technologies. But on the other hand, this revolution also poses many challenges for Vietnam in terms of making the inherent cultural identities of the nation become blurred or even lose its own identity.

First of all, on the positive side, in this revolution, Vietnam can take advantage of the great advantages of the Internet to bring traditional and unique cultural identities to international friends, export "culture", turn the cultural identity of the Vietnamese nation into a "soft power", especially to affirm its position on the world. On the other hand, modern science and technology will be an ever more effective means of education, to train people with culture and identity. Each person himself needs to be imbued with the traditional cultural values of the nation and consciously preserves and promotes those good cultural values. Thanks to technology, the transmission of such ideas to individuals in society will become more proactive and effective. High-speed Internet is

also an effective means to help Vietnamese people absorb the good and the beauty of different cultures, thereby creating and enriching the culture of the country.

However, the fourth industrial revolution has always raised concerns about the loss of individual identity as well as the identity of communities and countries around the world. The culture of Vietnam is no exception to that influence.

From an individual perspective, we take the risk of being caught up in the vortex of technological society and becoming a “screw” in that system; becoming individuals who no longer have their own individuality, indifference, no suffering, no emotions... And these things seem to be going against the good traditional values of Vietnamese people in history, which is a person attached in close relationships with family, community and society. The sharing and the mutual care among people in the family are the source of community cohesion for many generations, are the “root” of the strength of the Vietnamese nation in all historical periods.

In modern times, especially during the fourth industrial revolution, each individual seem to have too many opportunities to access the outside world, thereby creating a virtual world and virtual relationships. . That is one of the important reasons why people leave their family, which is the home of each person, thus making brotherly and kinship relationships loose, even losing themselves.

From a national perspective, technological advances in the fourth industrial revolution can increase the penetration of external cultural factors, in which, there are inherently many inappropriate factors, even go against the fine customs and traditions of the Vietnamese nation, thereby fading away the nation's precious traditional cultural identities and values. Nowadays, humanity continues to face the reality that: When the context of the times makes culture and cultural identity become the last factor to help countries and ethnic groups not be erased on the world map, it is the strong development of digital technology that is the catalysts that rapidly increase that risk. Therefore, one more problem for Vietnam in the fourth industrial revolution is: the rapid and strong socio-economic development but no trade-off with the “dissolution” of the national cultural identity, even the fourth industrial revolution is necessary to become a factor for promoting diversity and progress of the country's culture.

4. CONCLUSION

Digital technology allows us to spread and multiply the good things created from our own conscience and responsibility for our lives and the community That is also how each individual affirms their true existence value in the new era. Perhaps, this is the period when each person's conscience, responsibility, love... are easily spread to create common values for life. Therefore, more than ever, every Vietnamese should take advantage of the power of technology to multiply their own spiritual values with specific actions. That is a useful way to contribute to their own lives and for society.

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