

Pancasila as a Industrial Development Paradigm

Moh. Gufron Eramansyah^{1*}, Safitri², Masduki Asbari³

^{1,2}Sekolah Tinggi Ilmu Ekonomi Insan Pembangunan, Indonesia

³STMIK Insan Pembangunan, Indonesia

*Corresponding author email: era12374@gmail.com

Abstract – This paper aims to find out the concept of Pancasila in the 4.0 industrial revolution by examining Pancasila as a development paradigm. Development includes economic development, education and science and technology. The Industrial Revolution is to become a vision in life, especially focusing on improving the economy, education is designed how to print human resources that can be competitive in the industrial sector. The problem is that the development orientation is more focused in dealing with industrial developments causing the goal in the formation of the nation's personality to be reduced. This was followed by a weakening of the nation's character. Development will not be great if it is not based on the values embodied in the nation's morals, so a development reorientation is needed that refers to the Pancasila State philosophy, because basically Pancasila is a paradigm in development. Pancasila plays a role in providing several ethical principles for economic development, education and science and technology

Keywords: Development paradigm, industry 4.0., pancasila.

INTRODUCTION

The industrial revolution started with:

- 1) The Industrial Revolution 1.0 occurred in the 18th century through the invention of the steam engine, so that allows goods to be mass-produced,
- 2) The Industrial Revolution 2.0 occurred in the 19th-20th centuries through the use of electricity which made low production costs
- 3) The Industrial Revolution 3.0 occurred in the 1970s through the use of computerization,
- 4) The Industrial Revolution 4.0 itself occurred in the 2010s through intelligence engineering and the internet of things as the backbone of the movement and connectivity of humans and machines (Prasetyo 2018).

The industrial revolution 4.0 is a challenge for every country, this is especially influenced by the development of the internet. Technology has entered the third wave: the Internet of Things. This means that social and commercial media has entered its breaking point. World now entering the wave of smart devices that encourage people to live in beautiful works collaboration, besides the emergence of smart home, smart city, and smart shopping, is a new reality that we have to face. This creates opportunities as well as threats to our business (Kasali, 2017). Thus the industrial revolution 4.0 does not only affect the industry that includes production, business, market, and so on, but the revolution can also be studied from the context of social life, as according to Putranto (2018) that In fact, society is also an element of the life industry. Without realizing Indonesian society is increasingly immersed in technological developments. Development The very fast technology can be followed by the people of Indonesia easily. This matter it can be seen from the increasing frequency of communication technology appearing with features that increasingly sophisticated and in a short time has been able to attract customers in large numbers the big one. It is also supported by Buhr (2015) that Industry 4.0 is currently more of a vision than reality, but are poised to change not only the way we do business, but our social interactions in general. From the description above, the industrial revolution that occurred did not only affects the economic field, but poses challenges in the social field. According to (Morrar 2014) “*Social challenges are mainly the immense risk of cyber-crime due to increased connectivity, and job losses due to the automation of*

large segments of operations in many industries as part of Industry 4.0". In addition to the problem of criminal activity being carried out, in cyberspace by using computer technology or computer networks (*cyber-crime*). According to Nasir (2016) the nation's character is getting weaker. It is marked by the growth hedonistic, individualistic, radicalism, intolerance, depletion of solidarity, and morality; shift away from the noble values of the nation's culture, including the low actualization of the national pillars possessed, as expressed by Yudi Latif (2015): In the mental sky, the divine spirit, which should be the bearing of ethics, ethos, and compassion, shallowed by formalism and religious egoism. Humanity, who should lead to equality, independence, human brotherhood, paralyzed by individualism, materialism and hedonism, hoarding greed, status madness and power. Diversity, which should provide a vehicle for knowing each other, respecting each other, learn from each other, improve each other, share and serve each other to strengthen unity, instead becomes a vehicle for mutual denial, exclusion and mutual exclusion negate which leads to paralysis and mutual destruction". Apart from that the problem Another thing that happened in this Postmodern era was the emergence of a cosmopolitan society. Machfiroh, R. (2016) revealed that the postmodern era and digital citizens gave rise to society cosmopolitan, for example, the reduced role of the nation-state, the breakdown of traditional values, and increase in ecological disasters and individual anxiety. Not to mention the technology has been constructed cosmopolitan society as a personality. Postmodern society directly or indirectly indirectly will affect the existing culture, because now there is contact directly intercultural. This has an impact that is quite pronounced with the fading noble values of the nation on the status of Indonesian citizens as global citizens. How to deal with these problems while science and technology, in the present is a necessity in itself. For the human group who want absolute progress must have these two things. Science and technology ownership for facilitate human life and elevate human status, therefore ownership This must be accompanied by proper use. Acquired reality, ownership of science and technology is often misused, thus dehumanizing man himself. This is actually often done by scientists and technocrats. Whereas Whatever the results of science and technology, the consequences must be accounted for, both in the past, the present, as well as the future. In conditions such as the above, it is necessary to a platform that can be used as the spirit for the development of science and technology in Indonesia. Nation Indonesia, in all dimensions of its life, including in the field of science and technology, depends on strong whether or not they hold the spirit of their nation, namely Pancasila (Siswoyo, D., 2016). Therefore In this paper, we will discuss how Pancasila becomes a development paradigm economy, education and science and technology in the industrial revolution 4.0. Therefore, the function of Pancasila is provide orientation for the formation of a structure of socio-political and economic life that humane, democratic and just for all people.

DISCUSSION

Industrial Revolution 4.0 in Indonesia

The era of the fourth Industrial Revolution is colored by (artificial intelligence), supercomputers, genetic engineering, nanotechnology, automated cars, and innovation. These changes occur at an exponential rate which will have an impact on the economy, industry, government, and politics. In this era, the more visible the shape of the world is has become a global village (Satya, 2018).

The scientific term "Industry 4.0" was first introduced in Germany in 2011 in Hanoverfair, where it is used to not carry out the transformation process in the value chain global. In addition, "*The Fourth Industrial Revolution*", presented by K. Schwab at World Economic Forum, stated that Industry 4.0 involves business processes in industry global production network organization on the basis of new information and communication Internet technologies and technologies, with the help of which the interaction of the objects of production is carried out (Schwab 2017).

Indonesia is committed to building a competitive manufacturing industry globally by accelerating the implementation of Industry 4.0. This was marked by the launch of Making Indonesia 4.0 as a roadmap and strategy for Indonesia to enter the middle digital era running at this time. Indonesia's big vision in the industrial revolution 4.0 is to bring Indonesia become the top 10 economies by 2030.

The Ministry of Industry designs Making Indonesia which focuses on implementation of five industries namely; food and beverage, textile, automotive, electronics and chemical. The five industries are the backbone of the economy which is expected to able to have a great effect in increasing competitiveness and providing real

contribution to the Indonesian economy (Ministry of Industry, 2018).

The Ministry of Industry sets 4 steps in facing the industrial revolution 4.0 among others (Satya, 2018):

1. Improving the capabilities and skills of the Indonesian workforce, especially in using internet of things technology or integrating capabilities internet with production in industry.
2. Utilizing digital technology to boost productivity and competitiveness for the industry small and medium enterprises (IKM) in order to be able to penetrate the export market.
3. Utilizing more optimal digital technology in national industries such as big data, autonomous Robots, Cybersecurity, Cloud and Augmented Reality.
4. Encouraging technological innovation through the development of start-ups by facilitating business incubation so that there are more technology-based entrepreneurs in Indonesia

Pancasila ideology

Pancasila are five basic values in the form of a value system and idealized as conception of the basic philosophy of the State, view of life and ideology of the nation's state Indonesia. The five fundamental values are:

1. God Almighty
2. Just and civilized humanity
3. Indonesian Union
4. Democracy led by wisdom in representative deliberation
5. Social justice for all Indonesian people.

Since August 18, 1945, Pancasila has become the basis of the philosophy of the State (*Philosophieshe Grondlag*), State ideology and nation's way of life (*Weltanschauung*) Indonesia. "*Philosophieshe Grondlag*" is defined as a fundamental, philosophical, thought that deepest soul, deepest desire to establish an independent Indonesia. Besides, "*Weltanschauung*" is congruent with the existing philosophy and ideology in life (Latif, Y., 2015). Pancasila as the basis of the philosophy of the State because of the cause material or the origin of the material comes from religion, customs and culture of the Indonesian nation itself (Kaelan, 2016).

The values of the nation's way of life are extracted from various local and religious wisdoms and these human values serve as the basis for the ideology of the Indonesian nation. According to Lyman Tower S. (1986) ideology is a system of values or beliefs that are accepted as fact or truth by certain groups. Ideology consists of from a series of attitudes towards various social institutions and processes. The ideology of giving people who believe in a picture of the world both as it is and as should, and organize the complexities of life down to simple and understandable. Likewise, according to Yudi Latif (2015) ideology is a world view (*weltanschauung*) which oriented and systematized scientifically and philosophically.

The ideology of Pancasila brings private and community moral sources (religion, local wisdom, etc.). Historically, the five precepts of Pancasila are a combination of a diversity of beliefs (Latif, Yudi. 2015), understanding and hope that developed within the Indonesian nation itself. The first precept is a synthesis of all religions and beliefs. Second precept is a synthetic formulation of all social-humanitarian understandings and ideals transnational. The third precept is a synthetic formulation of ethnic diversity into national unity. The fourth precept is a synthesizing formulation of all understandings regarding sovereignty.

The fifth precept is a synthetic formulation of all understandings of socio-economic justice. This fundamental value of Pancasila is translated into instrumental values in the 1945 Constitution of the Republic of Indonesia in the form of legal norms and norms other. This norm is still general. Then it is translated back into practical values in the form of laws or other regulations and have implications for the behavior of the nation in the life of society, nation and state.

Pancasila as a Development Paradigm

Pancasila as the ideology or way of life of the nation, the implication is that Pancasila is development paradigm. Paradigm according to KBBI is a model in scientific theory knowledge or framework.

Meanwhile, according to Denis Goulet (1997) development, a figure who pioneered Development ethics calls for three views on development: First, the view that sees development as synonymous with economic growth, with GNP indicator and annual growth rate second, as formulated by the United Nations, that "development is economic growth" plus social change. Development in this sense is very broad, but often emphasis is placed on the development of the division of labor, the need for new institutions, the demand for new attitudes compatible with modern life; and views the third concerning development emphasizes ethical values. Pressure is exerted on increasing qualitatively the whole society and all the individuals in society.

Thus the development paradigm is a way of thinking, a reference for thinking, patterns of thinking, or framework of thinking in carrying out a development process which includes: social aspects, political aspects, economic aspects, defense aspects, infrastructure aspects, education, technological aspects, cultural aspects and so on.

Pancasila is expected to be a matrix or reference framework for building a model of society or to reform the socio-cultural order. There are two functions of Pancasila as a frame of reference, namely:
First, Pancasila is the basis of the vision that inspires to build a style future socio-cultural order, building the vision of the Indonesian people in the future will come.
Second, Pancasila as basic values become a reference for socio-cultural criticism (Siswoyo, D. 2016).

In the aspect of education, national education must be united on the basis of Pancasila. According to Notonagoro (1973) in Siswoyo, D. (2016), it is necessary to develop a scientific system based on Pancasila about the teachings, theory, philosophy, practice of national education, which is the single basis for solving national education problems.

In the economic aspect, national economic development must also mean development economic system that is considered the most suitable for the Indonesian nation. In system preparation a strong national economy to create a just and prosperous society is based on Pancasila. That is what is called the Pancasila Economic System. According to Yudi Latif (2015) an economy developed with a family spirit. Whereas The Pancasila Economic System is not a liberal-capitalistic economic system, nor is it an ethical or all-country economic system. Even so, the market system is still coloring economic life (Mubyarto, 1997).

Furthermore, Pancasila is also the spirit or reference in the development of science and technology. The development of IPEK must be based on a moral value, namely Pancasila so that it is appropriate and accepted by the Indonesian people.

The hope is that Pancasila can support a great civilization and make the State Indonesia is a big country. Because according to John Gardner in Yudi Latif (2015) mentions that it is not a nation that can achieve greatness if that nation do not believe in something, and something that he believes has a moral dimension to support great civilization.

Pancasila as the Development Paradigm of the Industrial Revolution 4.0

Based on Indonesia's big vision in the industrial revolution 4.0, which is to bring Indonesia will be in the top 10 economies in 2030. The government (Ministry of Industry) in roadmap making Indonesia focuses on improving the capabilities and skills of Indonesian workforce and the use of internet of things technology to improve economic productivity and increase the value of exports to small businesses in Indonesia, too support the use of digital technology for national industry and develop star up.

The development that is being promoted needs a paradigm, namely a framework thinking or a model of how essential things are done. On Basically, development is not an end in itself, but a development effort man. This takes the third view of development according to Goulet (1997). regarding development emphasize ethical

values.

In this conception the emphasis is not only on the useful outcome, but the process Achievement of results is also important. Development must have the Pancasila paradigm, namely development which is loaded with values that serve as the basis for developing a vision and as an evaluation or oversee the implementation of development. As according to Gardner in (Latif, Y., 2015) that to build a great civilization must be based on something that is believed and a moral dimension.

Thus, development in the era of the industrial revolution 4.0 is not only focused on digital-based economic growth, but also how to develop development in all fields referring to Pancasila as the nation's basic moral.

First, is the development of education in the era of the Industrial revolution 4.0. Education in his mission in this era is directed at creating humans who have skills in use technology for industrial development. On the one hand, education according to Law no. 20 of 2003 is a conscious and planned effort to create a learning atmosphere and process learning so that students actively develop their potential to have religious spiritual strength, self-control, personality, intelligence, noble character, and skills needed by himself, society, nation and state. If returned to in the sense in this Law which is the practical value of the basic value Pancasila as a development paradigm, education does not only focus on knowledge and skills, but the most important thing is to form a personality or instilling the values of Pancasila. The implication is that the teacher must be a good role model for his students.

Second, is how economic development in the era of the industrial revolution 4.0 is Pancasila perspective. National economic development must also mean system development which we consider the most suitable for the Indonesian nation. In system preparation a strong national economy to create a just and prosperous society or To achieve prosperity, Pancasila should be the philosophical basis. According to Yudi Latif (2015) the principle of welfare must have the spirit of mutual cooperation, namely developing participation and emancipation in the economic field with the spirit of kinship, not vision welfare based on individualism-capitalism. A social welfare national economy is confirmed and listed in the Article 33 of the 1945 Constitution, namely:

1. The economy is structured as a joint effort based on the principle of kinship,
2. Production branches that are important to the state and which affect people's livelihoods controlled by the state
3. Earth and water and the natural resources contained therein are controlled by the state and used for the greatest prosperity of the people
4. The national economy is organized based on economic democracy with the principles of:togetherness, fair efficiency, sustainable, environmentally friendly, independent, as well as by maintaining a balance of progress and national economic unit.

Economic orientation that leads to social justice and equality of opportunity and Social security is what remains and will always be the mission of the State of Indonesia in welcoming the industrial revolution 4.0. In addition to an economy that can take advantage of technology There must also be independence in the country's economy. Yudi Latif (2015) revealed several programs to fight for independence in the economy, namely:

1. Seizing economic independence as a prerequisite for grounding the economic plan in order to provide sufficient prosperity for the people of Indonesia
2. The Indonesian nation must develop a mental attitude and the ability to as much as possible maybe self sufficient
3. Revitalizing the role of the State in the economic field that controls the needs of the people a lot so that there is no monopoly by certain parties
4. All forms of business entities (BUMN) must reflect the nature of helping or family
5. Increasing cooperative-based SMEs as a form of economic democracy
6. Strengthening the competitiveness of the economy by increasing the added value of advantage of the potential of the resources owned
7. Strengthening food and energy sovereignty and prioritizing product purchases domestic
8. Paying greater attention to economic development maritime and creative economy.

The third is how the development of science and technology in the era of the industrial revolution 4.0 refers to the Pancasila. The development of science and technology provides a lot of convenience and progress for

nation, but also not a little negative impact. Science and technology development that does not based on the foundation of values will lead to a bad civilization. Therefore Pancasila plays a role in providing several ethical principles to science and technology, as follows (Siswoyo, D., 2016);

- a. Human dignity as a person, as a subject should not be used to science and technology and research interests.
- b. The principle of "no harm", must be avoided damage that threatens humanity.
- c. Science and technology should as much as possible help humans escape from difficulties his life.
- d. Science and technology monopoly must be avoided.
- e. There must be a common understanding between scientists and clergy, namely that Faith radiates in knowledge as an effort to understand "sunnatullah", and knowledge illuminates the path that faith has shown.

Furthermore, T. Jacob (2000) argues that Pancasila contains important things in the development of science and technology.

The precepts of the One Godhead remind man that he is only a creature with limitations like other creatures, both living and non-living. It cannot be separated from nature, while the universe can exist without humans.

The principle of just and civilized humanity is very important in the development of science and technology. Human welfare must be in humane ways. Design, experimentation, experimentation and creation must be ethical and do not harm individual humans or human beings, both now and in the future. In ethics there is a basic principle of not harming others and not being silent if you know there are things that harm humanity. Let's not fall into developing science and technology without a soul or without humanity.

The Precepts of the Indonesian Association remind us to develop science and technology about and for the entire homeland and nation. The aspects that are unique to Indonesia must be prioritized to be developed equally for the benefit of the entire nation, not only or especially for the interests of other nations.

The People's Precepts ask us to open equal opportunities for all citizens to be able to develop science and technology, and receive the results, according to their respective abilities and needs.

The precepts of Social Justice reinforce complete equity in allocation and treatment, in termination, implementation, gain and risk taking, by maximizing minimum groups.

CONCLUSION

In order to achieve the vision of the industrial revolution 4.0 in Indonesia in the development of education, economy and science and technology, it is necessary to guide and refer to Pancasila as the nation's ideology. Pancasila as the ideology or way of life of the nation implies that Pancasila is the paradigm of development. Pancasila is expected to be a matrix or frame of reference to build a model of society or to renew the socio-cultural order. Development is not only focused on utilizing digitalization but also educational development must be able to prepare human resources to have the power to empower their potential optimally in mastering science and technology in the orientation of educating the nation's life on the basis of faith and piety. And can create an economy that prospers all the people of Indonesia.

REFERENCES

- Buhr, D., 2015. *Social Innovation Policy for Industry 4.0*,
Goulet, D., 1997. Development ethics: a new discipline. *International Journal of Social Economics*, 24(11), pp.1160-1171.
<https://www.readcube.com/articles/10.21831%2Fhum.v19i1.30157>
Kaelan. 2016. *Pendidikan Pancasila*. Yogyakarta. Paradigma.
Kasali, Renald. 2017. *Distrubtion*. Jakarta: PT Gramedia.

- Latif, Yudi. 2015. Revolusi Pancasila. Jakarta: Mizan
- Machfiroh, R. 2016. Menjadi Warga Negara Pasca Modern dan Masyarakat Global Cyber (Teori Sosial Kewarganegaraan). Bandung: Widya Aksara Press.
- Morrar, R. et., 2014. The Fourth Industrial Revolution (Industry 4.0): A Social Innovation Perspective. *Technology Innovation Management Review*, 7(July), pp.3–5.
- Mubyarto 1997. “Bung Hatta dan Perekonomian Rakyat” dalam *Pemikiran Pembangunan Bung Hatta*. Jakarta : LP3ES
- Prasetyo, H. dkk., 2018. *Industri 4.0: Telah klarifikasi Aspek dan Arah Perkembangan Riset*. *Jurnal Teknik Industri*, 13(1).
- Putranto. 2018. *Menghadirkan Pancasila dalam Era Revolusi Industri Keempat*. https://indonesiana.tempo.co/read/126974/2018/05/24/aryono_16/menghadirkan-pancasila-dalam-era-revolusiindustri-keempat
- Satya, V.E., 2018. *Strategi Indonesia Menghadapi Industri. 4.0*. Info Singkat, X.
- Schwab, K., 2017. *The fourth industrial revolution*. Currency.
- Sergen, Lyman T. 1986. *Ideologi Politik Kontemporer (Alih bahasa oleh Sahat Simamora)*. Jakarta: Bina Aksara.
- Siswoyo, D. 2016. *Pancasila Sebagai Paradigma Pembangunan Bangsa (Pancasila)*. Yogyakarta: UNY Press.
- Undang-Undang Dasar Negara Republik Indonesia Tahun 1945*
- Undang-Undang No. 20 Tahun 2003 Tentang Sistem Pendidikan Nasional*.