



International Journal of Entrepreneurship & Technopreneur



Journal homepage: <https://ojs.unikom.ac.id/index.php/injetech>

The Influence of Innovation Models, Micro Small and Medium Enterprises, and Development Strategies Towards Cooperatives in Industrial Era 4.0

Arjuna Rizaldi*, Ecie Linasari**

*Universitas Komputer Indonesia, Indonesia

**Universität Hamburg, Germany

*Corresponding Email: arjuna@email.unikom.ac.id

ABSTRACTS

Cooperatives are Business entities that are driven and owned by members seeking to achieve common needs in various fields, utilizing the Industrial Era 4.0 in order to reach its goals. This paper aims to point out the impacts of innovation models, micro small and medium enterprises, and development strategies towards cooperatives in industrial era 4.0. Research methods outlined that are applied in this paper consists of Qualitative, Quantitative, Descriptive, and secondary research approaches. The results regarding to this paper are as follows. With the innovation model designated for the cooperative's renovation, it is expected that it has a positive impact on cooperatives and its pupils, creating a healthy and fair transaction process. Furthermore, small, medium and micro businesses as well as cooperatives need to adopt survival strategies and strategic methods, apply modern systems to their business processes, and strive to successfully answer various global challenges in the era of the Industrial Revolution 4.0. Finally, the transformation of the cooperative development strategy needs to be carried out considering that the new challenges of cooperatives are not only related to how to do business in the digital era but also change the overall perspective of the governance found in a cooperative of this modern era.

ARTICLE INFO

Article History:

Received

Revised

Accepted

Available

Keywords:

Cooperatives,
Innovation Models,
Micro Small and Medium
Enterprises, Development
Strategies, Industrial Era 4.0

1. INTRODUCTION

This paper would like to present the Industrial Era 4.0 for starters. It is a new technological advancement that integrates the physical, digital and biological environments, where there is a fundamental change in the way that humans work (Hamdan, 2018).

Furthermore, Industry 4.0 is related to a group of rapid transformations in the design, manufacture, operation and service of manufacturing systems and products. The 4.0 concept points out that this is the world's *fourth* industrial revolution, the continuation to three former industrial revolutions that caused quantum leaps in productivity and changed the lives human being (Davies, 2015).

Moreover, Angela Merkel, the German Chancellor, viewed Industry 4.0 as 'the comprehensive transformation of the whole sphere of industrial production through the merging of digital technology and the internet with conventional industry. Shortly, everything in and around a manufacturing operation (suppliers, the plant, distributors, even the product itself) is digitally connected, providing a highly integrated value chain.

The innovation and strategy designed by the cooperative in the process of renovating its working method benefitted from the Information Communication Technology (ICT) currently in this Industry 4.0 era. Secondly, Micro, small and medium enterprises (MSMEs) have an important role in the economic development sector

throughout the world (Sisira Kumara, et al., 2020).

To be able to develop the potential of MSMEs in Indonesia in Indonesia's economic development efforts, first efforts must be made to develop cooperative institutions so that they can have a good impact on MSMEs. Especially in the current era of the industrial revolution 4.0, the role of cooperative institutions is needed by MSMEs as financing institutions and providers of capital loans to build and develop their businesses.

Therefore, quality human resources must be prepared through HR development programs through empowerment, education, education and training by following industry developments. With this, human resources will be created who are competitive and can face the challenges that exist in the era of the industrial revolution 4.0, especially to increase the role of cooperatives for MSME business entities so that they can develop the potential of these MSMEs to improve the economy in the industrial era 4.0.

Thirdly, the rapid development of cooperatives every year and the need for business capital for the small business sector create cooperatives that are required to generate profits in spreading their business and can play a crucial role in the Indonesian economy, namely being a pillar of a teacher.

In this case, people who are creative and innovative will be able to adapt more quickly to the cooperative environment. With creative and innovative people, cooperatives can start their transformation to organize

their organization and business tactics according to the industrial era.

In addition, this paper would also like to discuss the views on German Cooperatives, which is very noticeable on improving the Cooperatives in Indonesia. In Germany, "Industrie 4.0" platform launched in 2010 aims at founding with € 1 billion private projects and applied research centres as well to serve tax benefits for investments in technological start-ups (Kagermann et al., 2013).

Related to the sufficient funds that the nation has, In Germany's cooperative system of federalism, the state government bears the responsibility to endow its municipalities with sufficient funds to ensure that they can fully perform their assignments. State funds are formula-based and distributed according to legally codified criteria.

In addition, state governments autonomously provide project grants for municipal infrastructure or current expenditure projects. Besides this basic funding by the state, the federal government provides funds to support municipalities in specific fields (Bury, Feld & Koehler, 2020).

Yet to be applied in Indonesia, Germany has its own cooperative academy. Academy of German Cooperatives (ADG) offers a highly diverse program of professional qualification measures (trainings, seminars, bachelor and master university degrees, workshops, and forums), whose main aim is to support the development of the next generation of cooperatives employees (Germany Country Report).

2. METHOD

There are four types of approaches related to this research paper. First of all is the qualitative method, spoken by Imam Gunawan et. al (2015) in which he defines that the approach is not obtained through statistical procedures and other calculations, seeks to understand an interaction event of certain human behavior according to the researcher's own perspective.

The second and third method of this research paper is the descriptive and quantitative approach. The last method used is the secondary research which focuses mainly on using data collection and sampling techniques obtained from previous article sources and other sources such as books, research reports or theses, and from the internet.

The source of data used in this study is secondary data which includes data on the level of cooperative development and the number of active cooperatives in Indonesia, the number of unemployed and the unemployment rate in Indonesia, as well as the number of poor people and the poverty rate existing in Indonesia.

3. RESULTS AND DISCUSSION

Starting with innovation models, cooperatives have numerous innovations and solutions in having an eyesight of digital-based cooperative transformation in Industry Era 4.0. The innovations include: 1). Performing a more efficient and practical working system in its operations based on kinship and adhere to the values of Pancasila. 2). Providing human

resources with education and training and be creative, innovative and also master the needs of the times. 3). Make developments on the system that has been designed along with the developments carried out by cooperatives, also socializing the new network system to members. 4). Restructuring the cooperatives, namely rearranging the order of vision, mission, and maximize the company's performance (Bramantyo, 2004). 5.) Evaluate problems that occur in cooperatives. 6). Realize the importance of cooperative developments based on information technology systems due to its contribution to the delivery of more effective public services, and good governance.

Heading to Micro, Small and Medium enterprises (MSMEs), The role of cooperatives in developing the potential of MSMEs as a sector that has the potential to absorb a large workforce for the people of Indonesia is very active. The role of cooperatives as an institution provides community needs in terms of facilities and infrastructure, as well as providing financing loans or business capital for people who want to

build and develop their businesses in order to create new businesses. job opportunities for Indonesian people.

This can be seen from previous research conducted by Semaun (2018) The conclusion of women's empowerment in increasing people's income is that the model of empowering women's cooperatives through productive business methods, improving performance and controlling savings and loan businesses is expected to skyrocket women's ability to develop businesses and cooperatives that are profitable. independently to achieve common prosperity.

The difficulty of developing cooperatives in Indonesia is mainly due to internal factors such as management, membership, and funding, while external problems stem from the lack of willingness of competitors and the community to join cooperatives.

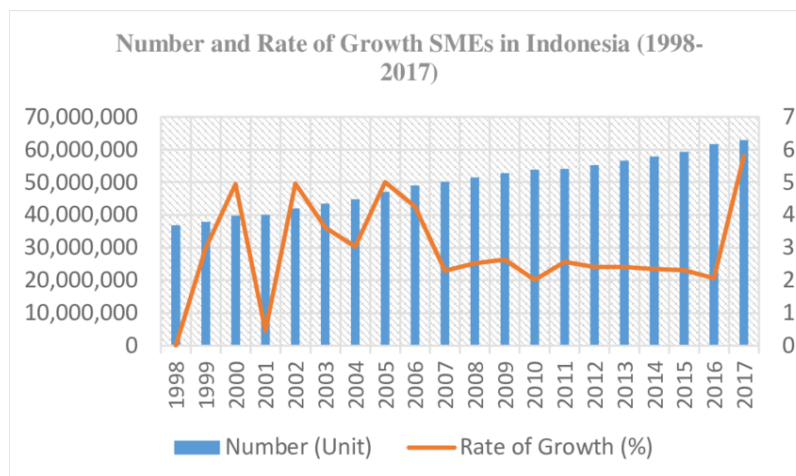


Fig. 1. Number and Rate of MSME's growth in Indonesia (1998-2017)

In view of the strategic role of small and medium-sized enterprises and the limited ability to develop small and medium-sized enterprises, the development of small and medium-sized enterprises is one of the strategies adopted by the current government in the context of economic growth.

The strategic role of small, medium and micro enterprises requires that they have a certain ability to develop and grow through their own businesses. If managed properly, small, medium and micro enterprises can increase productivity, increase people's income and contribute to regional income. With the policies of globalization and structural change, the demand for small, medium and micro enterprises is increasing.

The role of the state is to provide an effective regulatory framework and monitoring and enforcement mechanisms. Development is the efforts of governments, local governments, business and communities to strengthen the efforts of small, medium and micro enterprises by providing guidance and strengthening aid facilities to improve and enhance their capabilities and competitiveness.

Finally, the transformation of the cooperative development strategy needs to be carried out considering that the new challenges of cooperatives are not only related to how to do business in the digital era but also change the overall

perspective of the governance system contained in cooperatives if they are still used.

The previous strategy for developing cooperatives is that the Indonesian government tried to expand and disseminate the knowledge of cooperatives only by holding cooperative courses in various places. This is not effective if it is done now considering the era of the industrial revolution 4.0 is characterized by the rapid development of information where millennials like something practical, fast but safe.

The utilization of technology can be used as a means of conducting business efficiently, to increase competitiveness. Cooperatives can conduct Annual Member Meetings online, online transactions, and online member services.

According to Internet World Stats data, Indonesia's internet penetration at the of March 2021 was 76,8% of the total population. Internet users in the country reached 212,35 million with an estimated total population of 276,3 million. Indonesia is ranked 15th among Asian countries.

Indonesia is below Kazakhstan and above Vietnam. Indonesia's position is above the Asian penetration average of 63,9% of a population of 4,3 billion people and also above the world average of 65,7% of the estimated total population of 7,86% billion people.

Table 1. 20 Countries with the highest internet penetration

Country Name	Percentage
Brunei Darussalam	97,5%
South Korea	96,3%
Mako	96%
Japan	94,5%
Taiwan	92,4%
Malaysia	89%
Hong Kong	88,7%
Singapore	87,7%
Mogolia	82,1%
Thailand	81,5%
Philipines	80,2%
Georgia	78,5%
Azerbaijan	78,2%
Kazakhstan	77,2%
Indonesia	76,8%
Vietnam	76,1%
Nepal	73,8%
Armedia	71,7%
Cambodia	71,6%
Bangladesh	69,8%

Source: internetworldstats.com, March 2021

The government as the performers and implementers is expected to play an active role in formulating policies and implementing pro and having a positive impact on the development of cooperatives in Indonesia. The government's part in fostering cooperatives also plays an important role in creating cooperatives, because the policies carried out must be pro-people and for the welfare of the Indonesian

people alone, do not benefit other nations or individuals.

In addition, the government must also assist funds in developing cooperatives, not only provide funds, but also control the use of these funds.

4. CONCLUSION

Overall, cooperatives have advantages that are important in developing economic potential in Indonesia.

Moreover, it will become helpful in the form of activities in improving the economy. Cooperatives must have a really mature picture of innovation and strategy because the development of the digital economy will also threaten the existence of businesses that are unable to defend themselves from new transformations in the digital economy mode.

In addition, efforts to increase the potential of MSMEs and Cooperatives must be carried out so that problems or challenges faced in the current era of globalization or industrial revolution 4.0 can be controlled and can be used as new opportunities.

With the development of MSMEs in Indonesia, there is great potential for the development of a region, the creation of many new jobs for the Indonesian people, the creation of an even distribution of people's income, which affects Indonesia's economic growth and also with the development and improvement

of the competitiveness and productivity of MSMEs can minimize and reduce poverty in Indonesia.

Moreover, cooperatives in the 4.0 industrial revolution era, mainly in Indonesia have to adapt and transform the face of information and technology developments that continue to change dynamically, reflecting on cooperatives that are operating in Germany. Thus, transformation of the cooperative development strategy needs to be carried out considering that the new challenges of cooperatives are not only related to how to do business in the digital era but also change the overall perspective of the governance found in a cooperative.

ACKNOWLEDGEMENTS

I entrust this part to Mr. Don Juna as the head of the research team.

REFERENCES

- Al Idrus, S. (2007). Strategi Pengembangan Koperasi Indonesia Menuju Koperasi Mandiri. *Iqtishoduna*, 2(1).
- Bury, Y., Feld, L. P., & Köhler, E. A. (2020). Do Party Ties Increase Transfer Receipts in Cooperative Federalism?-Evidence from Germany.
- Bortolini, M., Ferrari, E., Gamberi, M., Pilati, F., & Faccio, M. (2017). Assembly system design in the Industry 4.0 era: a general framework. *IFAC-PapersOnLine*, 50(1), 5700-5705.
- Davies, Ron (2015). Industry 4.0 : Digitalisation for productivity and growth
- Heryadi, D. (2017). Transformasi Bisnis Koperasi Menuju Model Bisnis Korporasi (Studi Kasus Di Koperasi Indosat). *JABE (Journal of Applied Business and Economic)*, 1(4), 256-265.

- Kagermann, H., Helbig, J., Hellinger, A., and Wahlster, W. (2013). *Recommendations for implementing the strategic initiative INDUSTRIE 4.0*. Forschungsunion, Frankfurt/Main.
- Kumara, S., & Et Al. (2020). A Review Of Global Challenges And Survival Strategies of Small And Medium Enterprises (Smes). *Research Gate* .
- Rizaldi, A. Economic Cooperatives, Bandung : Universitas Komputer Indonesia. *Matter*, **1**, 4-41
- Maksum, I. R., & Et Al. (2020). A Social Enterprise Approach To Empowering Micro, Small And Medium Enterprises (Smes) In Indonesia. *Journal Of Open Innovation Technology, Market, And Company*, *Research Gate*.
- Ningsih, E., & Et Al. (2020). The Effect Of Cooperative Development On Poverty And Unemployment In The Province Of South Sumatera. . *Journal Of Management Economics And Accounting* Vol. 16(1).

Germany Country Report