



Indonesia's Multidimensional Challenge: Climate Crisis, Digital Economy and The Pandemic

By

Sri Harjanto Adi Pamungkas

Research Assistant of Public Policy and Management Department, Universitas Gadjah Mada
sri.harjanto.adi.pamungkas@mail.ugm.ac.id

Introduction

The world is entering a new phase that results in profound changes in social, economic, and political activities both domestically and internationally. Starting from the emergence of the post-industrial economy of mass production phase in 1950s, continued with the knowledge economy phase in 1990s, until the most recent one, namely the digital economy from the 2000s. These changes revolutionized the world's economic and geopolitical map significantly. Currently, China is one of new leaders in digital economy.¹ Whereas, in the United States, California with the Silicon Valley became the symbol of new industry, shifting aside Michigan with its manufacture.² Additionally, the presence of the climate crisis and the COVID-19 pandemic also creates a significant disruption of the world's current social and economic activities.

The presence of the digital economy, climate crisis, and the pandemic trigger multidimensional dynamics, especially in a world where the inter-connectivity of cross-border social and economic activities is ever-increasing. Activities in developed countries are the main cause of the climate crisis, but people in developing and underdeveloped countries suffer the most.³ On the other hand, the presence of the internet of things, cyber-physical systems, advanced robotics, and new materials open up opportunities to achieve a higher productivity and challenges in the employment sector.⁴ In the case of Indonesia, the digital economy, climate crisis, and pandemic offer an opportunity for multidimensional transformation if managed properly. In contrast, a multidimensional crisis can also emerge if these three things are managed poorly.



Analysis

In general, discussions related to the issue of the climate crisis focus on the impact of corporate activities on climate change.⁵ Corporate activities, mainly in sectors that produce high carbon emissions, such as manufacturing and land conversion to industry, play significant roles in the climate crisis. Hence, corporations play vital roles within the context of climate change, both as a cause and a solution.⁶ This means that they can play a strategic role in overcoming the climate crisis by transforming their operations so that they become more responsible and environmentally friendly corporations. Currently, pressures on corporations to reduce their carbon emissions are getting stronger.⁷

The next is the change in consumer behavior patterns, especially in Asia, which is now more guided by the principle of eco-responsibility. This change is shown in the results of the Redrawing Asia's Consumer Map survey conducted by the McKinsey Global Institute where more than 50 percent of respondents have changed the products and services they bought because of concerns about the climate crisis.⁸

Another phenomenon is the digital economy. The government of Indonesia needs to put attention to the ever-growing digital economy. Digital economy is based on the transfer of various social and economic activities towards the use of information and communication technology (ICT) integrated in an electronic ecosystem⁹ which consists of e-commerce, e-business, e-learning, e-media, and e-government. The continuous presence of the digital economy sector could potentially bring about 23 million job losses and 27 million job gains by 2030.¹⁰ Based on these projections, the current opportunities are greater than the existing challenges which may increase the number of layoffs, especially for repetitive types of work.

Micro, Small, and Medium Enterprises (MSMEs) are the key sectors to boost job opportunity in Indonesia. MSMEs are the most dominant business segment in Indonesia with a total of 64 million units with 116 million workers and a contribution to GDP of more than 60 percent.¹¹ Unfortunately, MSMEs in Indonesia have not yet reached a satisfactory level of digitalization. Until 2021, only 16.4 million MSMEs have entered the digital ecosystem.¹² Interestingly, Indonesia also has a lot of strategic potential such as a large young population, a growing middle class, an emerging startup ecosystem, the ability to produce a large number of STEM (Science, Technology, Engineering, and Mathematics) graduates, to national policy directions that are increasingly paying attention to science and technology.¹³ Therefore, the opportunity for Indonesia is widely open to get all the benefits of the





digital economy if it does well in building collaborative governance between MSMEs and a startup ecosystem that continues to grow.

The COVID-19 pandemic presents various dynamics such as rising poverty¹⁴, disruption of the production sector¹⁵, and tremendous pressure for marginalized groups.¹⁶ As a result, Indonesia experienced a major shock in terms of fiscal capacity. In 2020, the budget deficit reached 947.6 trillion rupiahs, state revenue fell 15.9 percent, and state expenditure rose 12.3 percent in 2020.¹⁷ On the other hand, the pandemic also presents opportunities to accelerate digitalization and strengthen the resilience of the national health system. Important policy lessons can be learned from Singapore with various innovations during the pandemic, such as building an online medical consultation system, building the “TraceTogether” application, using a robot called Spot, revitalizing the Smart Nation Program, and creating a national digital check-in system.¹⁸

Conclusion and Strategic Policy Recommendations for Indonesia

The application of a partial policy approach will not be sufficiently effective to promote multidimensional transformation for Indonesia. The multidimensional characteristics of the presence of the digital economy, climate crisis, and pandemic require a policy approach that is also multidimensional. The implication is that a collaborative combination of policy is needed. Therefore, a policy mix-based approach is more suitable in this context. Three strategic policy recommendations that need to be carried out by Indonesia. Each of these strategic policy recommendations consists of a set of policy sub-instruments that are important to be implemented in a synergistic and integrated manner.

The first recommendation is Indonesia must accelerate the development of green industries. The first step that can be used as a basis is to encourage the acceleration of carbon disclosure by corporations. The policy requires carbon disclosure to become a policy instrument that directly targets the main subject causing the climate crisis: corporations. This can be done by requiring all corporations to make annual reports based on The Global Reporting Initiative Guidelines, which are international environmental reporting standards. Implementation can be done gradually with a time limit of 3 years and a punishment mechanism is applied if the carbon disclosure has not exceeded the stipulated time limit. Carbon disclosure can create an ecosystem that encourages various other actors such as shareholders, creditors, institutional investors, and the public to boost increased carbon performance in corporations.¹⁹ This is important as corporations play a significant role in causing the climate crisis but simultaneously can play a vital role in overcoming the climate crisis.²⁰





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The second recommendation is Indonesia must encourage the acceleration and equity of the digital economy. The first and most essential step that can be taken is to accelerate the completion of the Palapa Ring mega project. This is important to ensure equal distribution of digital access on a national scale. The second step that can be taken is to encourage the acceleration of the digitalization of MSMEs. This can be done by providing MSME digitalization subsidies and tax breaks in the first accounting year after digitalization. The third step is to provide cross-use fiscal policy instruments. Further expansion of taxes on digital giants operating in Indonesia has to be a prioritized policy agenda. This tax revenue is then channeled in to building digital infrastructure, fiscal incentives (supply side) for domestic business actors. In addition, various other steps through e-government capacity building, improving the quality and access of STEM education, as well as fiscal incentives to encourage people's purchasing power (demand side) also need to be prioritized in policy agendas.

The third recommendation is Indonesia must build an innovation ecosystem based on the momentum of the pandemic. This is important as the presence of the pandemic has clearly revealed two crucial issues to be addressed. The first is fragile national health system's resilience in the face of health crises. The second is that the innovation capacity in health and biotechnology can present great economic potential. Therefore, the paradigm of innovation policy in Indonesia needs to be directed at the paradigm referred to by Schot and Steinmueller as innovation for transformative change.²¹ This paradigm is based on the principle that the government needs to regulate the direction of innovation development to bring about transformative change. Specifically, the government needs to develop a national innovation system to build the resilience of the national health system. In addition, the innovation policy framework needs to be directed at what Mazzucato calls mission-oriented policy.²² The point is to direct various policy instruments towards achieving a mission. Definitely, the mission is to achieve the advancement of the national biotechnology industry. Technically, the government needs to increase the gross expenditure on research and development (GERD) ratio and give *Badan Riset dan Inovasi Nasional* (BRIN) a special assignment to focus on developing a national biotechnology innovation system.





Endnote

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Contact:

The Habibie Center

Jl. Kemang Selatan No. 98, Jakarta 12560

Tel: +62 21 781 7211 | Fax: +62 21 781 7212

Email: thc@habibiecenter.or.id

Website: www.habibiecenter.or.id