

Research Article

Analyzing the Development Cooperation between Indonesia and Denmark in Developing a Circular Economy

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Abstract

Denmark and Indonesia have established development cooperation in developing circular economy which aims to resolve the climate change issue. This research will analyse the interest of both nations in forging international development cooperation and subsequently analyse the political economy aspect of the bilateral development cooperation between both nations. This research found that the bilateral development cooperation in developing circular economy in Indonesia is propelled by both domestic and international interests of both nations. Furthermore, through the institutionalist political economy perspective, the cooperation is not solely implemented through transferring the funds needed, but also by enhancing the technological aspect, public policy making, and institutionalizing the norms and values of circular economy in Indonesia's society.

Keywords: circular economy; development cooperation; Indonesia; Denmark

Introduction

The rapid environmental degradation and climate change crisis are propelling the transformation of all industries, states, and regions in all aspects of economic activities. There is a consensus that the ways of economic activities that are being implemented today need to be rejigged in order to be compatible with resource and environmental future concerns. Besides many concepts, paradigms, and approaches that have emerged recently, one of the ways of doing so is through circular economy. Circular economy has recently surfaced the discussions of societal and industrial transformation (Schroder et al, 2019). As a strategy that aims to address borderless issues, the discussion and implementation of a circular economy is not merely implemented by developed nations. Furthermore, the strategy in addressing climate change issues should be implemented holistically and involves developed, developing, and also under-developed nations.

Circular economy is not a new concept in the economic system, yet in recent years the discussion and efforts to implement circular economy have been accelerating, particularly in order to respond to climate change issues. Briefly, circular economy is a way of producing, distributing, and consuming that correlates with efficiency, restorative principle, reducing, reusing, and sustainability. The circular economy also becomes the paradigm that tries to ease tension between economic development and environmental problems. Hence, circular economy is a practice that supports economic growth and development while not putting aside the importance of sustainability. In practice, circular economy is more than technical and technology-related issues. Circular economy practices and concepts also urge changes in the society, especially the behaviour of not only industries and producers but also consumers. Furthermore, public policies that adopt circular economy principles in

society also matter. However, the disparities amongst the nations that enable the implementation of circular economy is dominated by the lack of technical and technological aspects (Pereira, 2015). Especially for the developing nations, inadequate capacity and funds also pose problems in fully adopting circular economy. Hence, it is necessary for nations to forge cooperation among each other in order to enhance the implementation of circular economy.

One of the bilateral cooperation to advance circular economy practices is implemented by Denmark and Indonesia. Denmark and Indonesia have agreed on various agreements in tackling climate change issues. Since the 2010s, both nations have been collaborating in addressing waste management, deforestation, marine pollution, and renewable energy issues. Furthermore, both nations have also been enhancing circular economy partnership as the crucial strategy in tackling climate change issues since 2015. In 2018, Indonesia and Denmark have agreed on Strategic Sector Cooperation (SSC) which focuses on addressing Indonesian waste management issues including food waste, plastics, and construction waste. Recently in 2020, both nations have also forged a bilateral agreement that also included the United Nations Development Programme (UNDP) in accelerating circular economy implementation in Indonesia. Arguably, bilateral cooperation between Denmark and Indonesia has been increasing incrementally over the years.

Indonesia's cooperation with Denmark in the development of a circular economy covers various fields and economic sectors. In 2017, Indonesia and Denmark signed a Memorandum of Understanding (MoU) regarding cooperation in the development of a circular economy and waste management through the Environmental Support Program Phase 3 (ESP3). In 2018, Indonesia and Denmark signed a cooperation in the Strategic Sector Cooperation (SSC) which focuses on developing a green economy model and supporting environmental sustainability. The Danish Ministry of Foreign Affairs together with the Danish Environmental Protection Agency (DEPA) are the parties that fund this development cooperation program with an implementation period from 2018 to 2022 in collaboration with the Ministry of Environment and Forestry of the Republic of Indonesia. This collaboration aims to encourage the development of a good and systematic waste and waste management mechanism which can then be integrated into the community's economy by involving many parties such as local governments, private companies and universities. At the end of 2020, the Kingdom of Denmark collaborated with the United Nations Development Program (UNDP) to launch a cooperation mechanism for Indonesia in the development of a circular economy. Denmark handed over development funds indirectly to the Government of Indonesia through UNDP to develop circular economy practices in Indonesia (UNDP, 2020). This collaboration between Denmark and Indonesia by involving UNDP focuses on improving waste and waste management in several key areas, namely the processing of food waste, electronics, textiles, plastic waste, and construction waste.

Domestically, Denmark and Indonesia have been implementing circular economy practices, yet both nations are not in the same stage of developing a circular economy. Circular economy practices in Indonesia have been developing gradually over the last few decades. The advancement of circular economy practices and policies have been implemented in several industrial policies, both nationally and locally. The policies such as Policies and National Strategies for Waste Management (Jaktranas) in 2017 and Presidential Decree No. 35, 2018 also focus on accelerating waste management to become renewable energy and support the implementation of circular economy in Indonesia. Alas, the implementation of circular economy in Indonesia is still inadequate to tackle climate change issues, which is proven by the increasing amount of waste in Indonesia. According to the data, Indonesia is still the second largest producer of plastic waste in the world, after China. This is caused by the lack of funds, holistic policies, societal behaviour, and also technological advancement (Sumartiningtyas, 2020). According to the UNDP, Indonesia needs at least US\$ 21 billion to build a circular economy system (UNDP, 2020a). According to the research conducted by the Danish government, with the amount of financial support to advance the circular economy, Indonesia is not able to resolve waste problems (Denmark Ministry of Foreign Affairs, 2017). From the business perspective, circular economy policies are still vague and unclear.

On the other hand, Denmark has been advancing circular economy in its domestic economy. Denmark has become one of the leading nations in advancing circular economy. The acceleration of Denmark in implementing circular economy can be seen from the rapid growth of renewable energy use, proficient waste management, and efficiency in production. Denmark's circular economy implementation is not limited to technological and technical aspects, but also in its domestic policies that propel businesses and society to adopt circular economy principles. One of the successful projects of Denmark in implementing circular economy is generating electricity from waste. In 2019, almost every waste in Denmark is recycled. Even Denmark imported waste of 300.000 tons from England in 2015 to be processed for generating electricity. Furthermore, Denmark also includes circular economy paradigms in international development cooperation with other countries, especially developing nations such as African nations and Asian nations, for instance Indonesia. As indicated in one of the Danish national documents, the Danish government is fully committed to be a leading nation in tackling climate change issues including through advancing circular economy, both domestically and internationally (Rosendal, 2014).

This article seeks to question the motivation of both nations and the development cooperation mechanism that occur between Indonesia and Denmark in advancing circular economy principles and practices. Moreover, this article also seeks to analyse the implementation of development cooperation between Denmark and Indonesia in advancing circular economy from the political-economy perspectives.

Literature Review

International development cooperation in advancing circular economy is still rarely studied. Since the discussion of circular economy is mainly about technical and technological aspects, it is arguably important for circular economy as an international agenda to also be studied from an international relations perspective. Aiming to explain the political economy aspects of development cooperation in developing circular economy, this article will utilize the national interest concept and institutionalist political economy theory.

The interpretation of national interest in international development cooperation has changed, especially since the formation of the Paris Agreement and the Sustainable Development Goals (SDGs) (Keijzer & Lundsgaarde, 2018). The purpose of implementing international development cooperation is no longer understood separately in an extreme spectrum; between merely achieving national interests or state altruism alone (Gulrajani & Calleja, 2021). The alteration that occurs is that the national interests of a country in carrying out development cooperation, especially since the formation of the Paris Agreement and the SDGs become aligned with international interests and agendas. In a world that is increasingly globalized and dependent, collaboration and cooperation are needed, especially in addressing issues that transcend national boundaries, such as climate change. This change requires countries to cooperate with each other in fighting for common interests to overcome problems that will threaten the existence of the entire world, such as climate change. With the concept of national interest in development cooperation, this study aims to analyse the interests of Indonesia and Denmark, both from the national and international point of view in developing circular economy practices in Indonesia.

The institutionalist political economy approach will be used to analyse the political aspects of development cooperation between Indonesia and Denmark in developing circular economy. The institutionalist approach explains that development cooperation is a political process in the context of advocating universal values and assuming that Southern countries like Indonesia are an object of governance that pays great attention to the guidelines for values, institutions and norms adopted by developed countries (Hapsari, 2021). The institutionalist economic approach advocates for collaboration in more advanced transformation and modernization in the industrial and economic sectors, including in alleviating environmental problems. The cooperation between Indonesia and Denmark through this approach is understood as a dependence on the

development of technology and knowledge from Indonesia to developed countries such as Denmark which have developed the implementation of circular economy. Apart from that, from a political perspective, this development cooperation is an attempt by Denmark as a developed country to expand the implementation of environmental norms in the economic practice of developing countries (Schulz et al., 2019). Through this perspective, this study also wants to look at the key actors in both Denmark and Indonesia in the context of norm expansion of the circular economy.

Methods

In answering the research question, this research will utilize qualitative analysis to comprehend Denmark and Indonesia's bilateral cooperation in advancing circular economy. The collection of relevant data will be done through literature review through numerous books, journals, scientific research, speeches, reports, and other relevant resources. Furthermore, the data collection was conducted through analysing bilateral documents in advancing circular economy.

Results and Analysis

National Interest

Indonesia and Denmark are advancing the circular economy system due to their aims to achieve national interest in relations to efforts in tackling climate change issues. A nation will forge cooperation that will benefit its own interest (Schneider, 2018). The definition of national interest is wide, which may include military, security, economy and sovereignty interests. This article, however, defines Denmark and Indonesia's interests that are correlated with the international agenda in tackling climate change issues, such as the Paris Agreement and Sustainable Development Goals. Ivanova and Figueres (2002) argue that due to the empirical findings and information about climate change catastrophic impacts, the states are beginning to alter their definition of national interest (Ivanova & Figueres, 2002).

The states are beginning to align their national interests with international agenda particularly in tackling climate change issues. Hence, it is necessary to look deeply into Indonesia and Denmark's documents, be it bilateral cooperation documents and national documents that inform the national interest of both nations in forging development cooperation in advancing circular economy in Indonesia.

For Indonesia, the circular economy is strategically crucial since there is an urgency for the Indonesian government to resolve national waste issues, predicted to reach 70 million tons of waste per year in 2025 (Nurdiana, et al., 2019). In the 2nd Indonesia Circular Economy Forum (ICEF), the Ministry of National Development Planning/National Development Planning Agency (Bappenas) mentioned that Indonesia still lacks funds to construct a circular economy system. Hence, through international cooperation, Indonesia aims to attract circular economy investment from the international society. As Airlangga Hartarto in Economics Talk: "Emphasizing Circular Economy: Scalling Up Indonesia's Economy within Planetary and Social Boundaries", mentioned international cooperation will benefit Indonesia to decrease carbon emission up to 41% in 2030 (Kementerian Koordinator Bidang Perekonomian Republik Indonesia, 2021).

In addition to the interest in developing a circular economy in the domestic sphere, bilateral cooperation with Denmark in the implementation of a circular economy is also driven by Indonesia's commitment to international agreements to contribute in overcoming climate change issues, such as through the Paris Agreement and the SDGs (Kementerian PPN/Bappenas, 2020). Furthermore, this policy also reiterates Indonesia's commitment towards the previous international agreements such as the Basel Agreement and the Kyoto Protocol (Fatimah et al., 2020). The Indonesian government has committed to meet the targets that have been carried out by the leaders of countries in the world in the context of preventing climate change, which is

shown, for example, through the Nationally Determined Contribution (NDC) which is correlated with the SDGs and also the ratification of the Paris Agreement on preventing climate change (Kementerian Lingkungan Hidup dan Kehutanan Indonesia, 2021) . The implementation of a circular economy is closely related to the SDG targets. The application of the principles and values of the circular economy in community economic activities can be a way for achieving the targets or goals in the SDG points (Azizuddin et al., 2021). Therefore, the Indonesian government is trying to develop a circular economy in the Indonesian economic system, especially in terms of waste and waste management.

In terms of its national interests, both domestically and internationally, Indonesia has an interest in the selection of Denmark as a cooperation partner for the development of a circular economy. The choice for Denmark as a cooperation partner occurred because Denmark is a leading country in the context of waste management, both in the context of the 13 policies, as well as technical aspects including to process waste and waste into renewable energy sources (Kementerian Lingkungan Hidup dan Kehutanan Indonesia, 2017). Collaborating with Denmark will provide an opportunity for Indonesia to learn directly from Denmark in developing a better circular economy. Furthermore, Indonesia also chose Denmark in order to achieve the targets proposed to the international community such as efforts to achieve the targets of the Paris Agreement and also the goals of the SDGs. Collaborating with Denmark, which has the same vision and goals in tackling climate change, will greatly assist Indonesia in developing a circular economy to achieve the goals that have become Indonesia's commitment to the Paris Agreement and the SDGs.

For Denmark itself, a bilateral cooperation with Indonesia aims to fulfil its national interests both domestically and internationally. According to the Danish government, Denmark is not solely focusing on implementing circular economy within the domestic context but also with other nations simultaneously (Benzie & Persson, 2019). The choice of Indonesia as a partner for cooperation with Denmark is not without reason. In the Danish government document, although cooperation is carried out with many other developing countries, Indonesia is one of the priority concerns given the potential of the economy, which is still quite large with a very large population that has the potential to bring big consequences as a country with the second largest waste producer in the world (The Danish Government, 2020). Therefore, the Danish government strives to continue to actively contribute in its assistance to reduce waste that is a source of pollution for environmental sustainability, not only in Indonesia but also in the international context (The Danish Government, 2018).

The Danish government believes that it is imperative for Denmark to cooperate with other countries, especially with developing countries, if it wants to solve environmental problems. As Antonio, an economist from Complutense University of Madrid, argues that in responding towards the climate change issues, there should be no one is left behind (Antonio, 2018). Bilateral cooperation based on government-to-government relations is carried out to build a solid foundation for the development and implementation of a circular economy. This is arguably driven by the role of the government which is considered very central related to the internalization of values and practices as well as the community's views on the development of a circular economy (Preston et al., 2019). In foreign policy documents issued in 2020, 2021 and 2022, the priority of Denmark's development cooperation is to promote cooperation with governments of developing countries in tackling climate change and building a sustainable economy. The implementation of aid was carried out by Denmark in the form of financial assistance as well as science and technology assistance to developing countries such as Indonesia in order to implement a circular economy system. The role of Denmark in development cooperation in dealing with climate change can also be understood as an active contributor to changes in climate change management in developing countries such as Indonesia.

Through the Ministry of Foreign Affairs and the Danish Environmental Protection Agency, the Danish government has committed to a fairly strong cooperation in developing a circular economy with Indonesia. This commitment is based on the view that there is an understanding of green realism which views human activities

and the environment as correlated, which does not only affect one or two countries, but also extend beyond the territorial boundaries of the state (Engberg-Pedersen & Moe Fejerskov, 2021). In 2015, the Danish Prime Minister, Lars Lokke Rasmussen, mentioned that Denmark is a country that wants economic growth to continue and poverty to be reduced, and at the same time wants economic and business activities to not impact negatively toward environmental sustainability. This commitment was also continued by the current Prime Minister of Denmark, Mette Frederiksen, who was newly elected in 2019, who committed that Denmark would pay attention to green economy development, especially in developing countries. Frederiksen said that the Danish government is paying more attention to the implementation of a circular economy as a way of tackling climate change (Hazlegreaves, 2020). Therefore, it can be understood that Denmark's cooperation with Indonesia in developing a circular economy has become the commitment of the Danish government's cooperation in tackling the issue of climate change with developing countries.

In relations to international interests and agendas, Denmark has the same interests as Indonesia, which is to meet the targets and promises of the Paris Agreement and the SDGs. Denmark has a goal of achieving the targets of the Paris Agreement and the SDGs. This is clearly manifested in the document titled, 'The Danish's Government Priorities for Development Cooperation', which is released annually by placing the issue of climate change and sustainable economic development in developing countries as a top priority in its international development cooperation. By supporting Indonesia in its efforts to implement a circular economy, Denmark wants to actively contribute to the targets that have been jointly proclaimed with other countries in the Paris Agreement and also in the SDGs. Denmark's national interest in the context of climate change and the achievement of the SDGs in practice coincides with Denmark's national interest in general. In the document "A Green and Sustainable World: The Danish Government Long Term Strategy for Global Climate Action in 2030", for example, the national interest of Denmark's development cooperation in the long term is to promote prosperity, sustainable development, as well as a green economy in other countries.

Institutionalist Political Economy Perspective

By using the institutionalist political economy perspective, the deepening collaboration between Indonesia and Denmark shows that there is an effort to expand environmental norms from northern countries such as Denmark to southern countries such as Indonesia in implementing a circular economy. There is still a lack of discussion on circular economy through a political aspect (Pansera et al., 2021). The institutionalist political economy perspective understands that development cooperation in dealing with climate change places Southern and Northern countries in an uneven position. Southern countries such as Indonesia have become objects of the expansion of values and norms that exist in developed countries such as Denmark (Camacho-Otero et al., 2018; Conlon et al., 2019). The expansion of norms and institutionalization of circular economic values occurs through the Denmark-Indonesia development cooperation in advancing circular economy in Indonesia. As indicated through several cooperation documents, Indonesia's cooperation with Denmark also includes policymaking cooperation in developing a circular economy in Indonesia, which involves consultations from Denmark as a country that has initially developed the implementation of a circular economy and is considered successful. In the Strategic Sector Cooperation on Sustainable Island Initiative (SII) document, the Danish government cooperates with local governments in making policies. Denmark also cooperates with Indonesia in creating the Jaktranas policy.

The spread of the idea and practices of a circular economy to become a universally acceptable norm, especially for developing countries such as Indonesia, is central in the institutionalist political economy view of international cooperation on the circular economy. Developed countries such as Denmark, through various mechanisms, encourage people in developing countries such as Indonesia to follow the transformative values and universal practices that exist in developed countries, especially to reduce the negative impact of economic activities on the environment (Camacho-Otero et al., 2018). Norms and internalization are carried out through

various public policies or bureaucracies which will eventually become a habit and become institutionalized in a society (Finnemore & Sikkink, 1998).

The diffusion of norms in developing a circular economy system in a society is pivotal considering that the circular economy is related to changes in behaviour and patterns of life in society as a whole. This is in line with the arguments put forward by Zurbrügg et al., (2014) in their research on the development of sewage treatment in developing countries wherein the success or failure of waste treatment projects depends on both, the acceptance and understanding of the community towards the idea of waste and sewage treatment, and the positive role of supporting institutions in terms of public policies, managerial functions, and the ability to finance waste and waste management projects. In this context, the government of a country plays an important role in internalizing and formalizing circular economy norms and practices in various economic and industrial policies that are carried out (Preston & Lehne, 2017). In other countries such as the Netherlands, the government has been actively propelling its economic system towards a circular economy system. Numerous national documents indicate that the targets of the circular economy system will completely replace the linear economy by 2050 (Schröder et al, 2019, p.5). The Government of Netherland has implemented the enforcement through laws and policies, where business and society should implement circular economy practices and principles in every aspect of the domestic economy.

Denmark internalizes norms and diffusion of circular economic practices to Indonesia through various mechanisms. The diffusion of circular economy norms and practices is carried out, for example, by participating in formulating policies and guidelines for the development of a circular economy in Indonesia in the Strategic Sectoral Cooperation (SSC) (Gilardi, 2012). This is done because in the transformation effort towards sustainable economic development, the role of government institutions is very central (Ghisellini & Ulgiati, 2019). The role of government is very important in shaping the values and preferences of various actors involved in running a circular economy (Vatn, 2020). Therefore, a change of policies, norms and regulations that are formed in society become very important in the transition to sustainable economic practices (Scott, 2014). In several of these cooperation documents, the role of the Danish government is to focus on handling waste and waste issues in Indonesia. The Danish government has also collaborated with the Indonesian Ministry of Environment and Forestry in compiling the Guidelines for Organic Waste Management and Waste to Energy Waste Preparation in Indonesia, which was only issued at the end of 2020. These guidelines serve as a reference for local governments at the city level in Indonesia in formulating waste-processing policies in the area, especially in reprocessing it into a source of energy for the surrounding community.

Upon analysing various cooperation documents that have been carried out, Indonesia's cooperation with Denmark in the development of a circular economy tend to focus on cooperation in waste and waste management which is increasing in Indonesia, though still paying attention to other sectors. In addition, the effects of the cooperation with Denmark can be seen from the formulated policies that are increasingly sustainable and coherent towards the development of a circular economy in urban areas in Indonesia. These documents, for example, are in the form of policy guidelines and the application of waste and waste management in urban areas in Indonesia, such as the Guidelines for Organic Waste Management and Waste to Energy Preparation, which were issued only in 2020. The procurement of policy guidelines for the implementation of the circular economy in urban areas shows a change in policy synchronization in the development of a circular economy, which has never been issued by the Indonesian government through previous regulations, where there is no comprehensive guideline regarding the stages in developing waste management in urban areas.

In addition to analysing the diffusion of circular economic values and norms into policymaking and society, the institutionalist political economy theory also underscores the importance of accelerating technological cooperation and industrializing modernization in an effort to prevent climate change. Without cooperation in

technology and industrial modernization, developing countries will experience difficulties in implementing circular economy practices. The cooperation in enhancing technological capacity and knowledge for implementing circular economy provides opportunities for developing countries such as Indonesia to continue to modernize in waste management and industry to prevent climate change. Capacity building of developing countries such as Indonesia is crucial to help achieve the targets that have been set at the international level (Clapp & Dauvergne, 2005).

Indonesia's cooperation with Denmark in technological development is stated in various bilateral cooperation documents. Through a pilot project spread across seven cities in Indonesia, Denmark is collaborating with local governments to build machines or technology that can turn waste into a source of electrical energy for the society. One of the cities that has become a pilot project area is Semarang, which was initiated in 2017. From the collaboration of the Danish government with the Indonesian Ministry of Environment and Forestry and the Semarang city government, the cooperation is carried out to build sustainable waste management in the city. From 2017 to 2019, Denmark assisted in procuring landfill gas-based waste-processing technology where there was a final disposal site for Jatibarang, Semarang (Rizqi, 2017). This collaboration was carried out within the DANIDA (Danish International Development Agency) mechanism in accordance with the agreement contained in the MoU between Indonesia and Denmark regarding cooperation in the development of a circular economy in Indonesia. The Danish government through DANIDA has provided assistance funds for the process of developing the waste processing into electricity reaching Rp. 49 billion. After implementing a cooperation process in three stages starting from the construction of landfill gas to an incinerator, in 2019 the joint project was completed. The Semarang City Government then chose PT Bumi Pandhanaran Sejahtera which is a regional-owned enterprises from the Semarang government to manage the Jatibarang Incineration Waste-to-Energy Powerplant (Rizqi, 2017).

Conclusion

The result of this study shows that bilateral cooperation between Denmark and Indonesia is propelled by both nations' national interest which are shown in several national documents. Furthermore, this research also finds that Indonesia and Denmark's national interest in advancing the circular economy also intersect with international agendas that aim to tackle climate change issues particularly in the Paris Agreement and the Sustainable Development Goals (SDGs). Through an institutionalist political economy perspective, this study also finds that there is an internalization of norms and values of the circular economy into Indonesian societies including governments and businesses. Denmark, through cooperating with Indonesia, is trying to incorporate the practices and values of the circular economy that have been implemented in Denmark towards Indonesia. Arguably, bilateral cooperation between Denmark and Indonesia is not merely implemented in advancing technological aspects but also in advancing policy-making processes and the internalization of norms and values. The internalization of circular economy principles and practices is also done through socialization and various workshops and webinars which are supported by the Danish government. According to the authors, in the next research, it is also necessary to do an in-depth research on the effectiveness of Indonesia-Denmark cooperation in advancing circular economy practices and values in Indonesia.

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