Challenge 7
Rural Economic Revitalisation and Regional Development

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Less Java-centric Development

Indonesia aims to distribute its economic activity more evenly outside Java, particularly to Eastern Indonesia. The government has targeted reducing Java's share in the national output from around 60% in 2015 to around 50% by 2045. In the context of rural development, a national development paradigm that is less Java-centric will be relevant.

Although the total rural population in Indonesia is projected to decline to about 29.6% in 2035, it will still consist of 90.5 million people, almost equivalent to the size of Thailand's present overall population. The rural population will live predominantly (71.3% or around 64.5 million people) outside Java Island. By that time, the share of the rural population in islands outside Java (46.6%) will be almost similar to that of Indonesia today (45.5%). A vision of less Java-centric development should focus on regions outside Java, which coincidently have stronger rural characteristics.

Reducing inter-regional disparity in economic development will rely much on reducing the infrastructure gap. Less-developed regions, particularly those outside Java Island, are the focus of the Indonesian government's ambitious infrastructure development. In summary, at least the following areas have been outlined by the government for its 2045 long-term vision. The first area is strengthening physical and virtual connectivity.

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For example, the government has targeted that by 2045 logistics costs should decrease from 19.2% of gross domestic product (GDP) today to 8%. Another specific plan is to build at least six international seaports as well as increase the share of sea transportation in the distribution system. Lastly, the government has also mentioned the need to build infrastructure that has anticipated the impacts of climate change.

Rural and Agricultural Development

The development of rural areas and agriculture are closely interlinked. As the fourth most populous country in the world, food security is and will be amongst the top development priorities for Indonesia. The Indonesian long-run vision aims to improve the country's food security and be self-sufficient in at least carbohydrate and protein intake through agriculture modernisation. This cannot be achieved without simultaneously revitalising the development of rural areas.

The past underinvestment in rural areas needs to be changed, and quality infrastructure should be developed in rural areas, too. In particular, the Indonesian government envisions rural infrastructure as having compact facilities, serving low-medium mobility, and supporting agriculture and mining-based industries. In terms of agriculture, irrigated agricultural land is targeted to be at least 40% of all agricultural land by 2045. This will contribute to the target of expanding agricultural value added and becoming an exporter of processed agriculture products.

Improving farmers' welfare is also on the priority list. As of today, 46.2% of the bottom 40% of the population are farmers. The Indonesian government envisions substantially improved welfare for farmers in 2045. The productivity of farmers is targeted to be 4.3 times higher than in 2015, and their entrepreneurial skills should be enhanced. Strategies to achieve these targets include agrarian reforms, increasing farmers' human capital, improving access to productive resources, strengthening farmers' business institutions, integrating farm and non-farm activities, innovation, and the application of food and agriculture technologies.

Challenges in Reducing Rural Poverty

Although Indonesia's poverty incidence at the national level continues to decline, the poverty incidence in rural areas is still high. In 2017, as many as 13.5% of the rural population, or around 16 million people, were still living under the poverty line. The poverty line is equivalent to around PPP$2.4 – quite close to PPP$1.9, which is considered the extreme poverty line, the median poverty line of low-income countries (Jolliffe and Prydz, 2016). Moreover, the rate of poverty reduction is also still higher in rural areas.

Monetary poverty is not the only representation of the welfare of the rural population. The problem lies in the weakness of the monetary measure of poverty incidence. Monetary income is a private good, while welfare is also a function of access to various public facilities and services and is no longer complete in capturing the true measure of deprivation. Multidimensional poverty can be an important complementary measure.[2] Rising income and consumption amongst the monetary or multidimensional poor can lead to improved nutritional intake and outcomes, or improved access to education, healthcare, and related outcomes, but public spending is important in terms of the provision of free or subsidised public education and healthcare. Social policies, such as redistributive transfers, can further support the reduction of both monetary and multidimensional poverty.

According to some studies, at the national level, both standard monetary poverty and multidimensional poverty are declining over time at almost similar rates. For urban areas, even the levels are similar, meaning that not only are they declining at almost the same rate, but their levels of incidence are similar. For rural areas, multidimensional poverty is much higher than standard monetary poverty. This implies that there are many hidden dimensions of poverty disguised by standard monetary poverty. To address the true welfare gap between the urban and rural population, we need to look carefully at various dimensions of welfare and deprivation. This is even more relevant in the context of assigning what needs to be achieved in the context of the Indonesia Vision 2045.

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[2] Yusuf and Sumner (2018), following and extending Alkire and Foster (2011), estimated Indonesia's multidimensional poverty for the period 1994–2014.

The Challenges of Low Employment, Education, and Skills amongst the Rural Population

Recent statistics on development outcomes that distinguish between urban and rural areas still show large gaps in various dimensions. We can identify that the rural–urban gap is largest for those indicators related particularly to the young population and women. In particular, the lagging indicators include ones related to child marriage, teenage fertility, and the access of the young population to skill formation (such as information and communication technology and university education). For example, child marriage in rural areas is three times higher than in urban areas. As a result, the fertility rate amongst very young women is also much higher than in urban areas, where the gap is 115%. The urban–rural gap in labour formality in rural areas is also amongst the highest (105.6%).

This points to the conclusion that if we want to narrow down the urban–rural gaps in development, efforts should be directed to opening up opportunities to the young population in rural areas, especially regarding access to skill development through training and higher level education. Particular attention should be given to the female young population in rural areas. This will be an effective way of addressing the related gaps, such as the high labour formality gap and underemployment gap. Skill development certainly needs to be addressed through certain types of formal education, such as tertiary education. However, it can also be developed to be more vocational in nature, for example by establishing polytechnics or technical schools near rural areas. Informal education through access to information and communication technology should be expanded more progressively to rural areas as these areas are where the urban–rural gap is the largest.

Sanitation facilities (such as improved sanitation and hand-washing facilities) are another area where the rural–urban gap is amongst the largest. This is significant as bad sanitation is highly related with the incidence of diarrhoea amongst children below 5 years of age, and it may have a lasting impact on child development through ineffective nutritional intake, which is an important factor for future skill development.

Challenges in Agricultural Transformation

Indonesia, along with many other developing countries, has experienced premature deindustrialisation. Realising the vision of reindustrialisation and the diversification of economic activities is difficult without credible strategies to overcome this trend. The future challenges of favourable structural transformation need to be anticipated in line with the past and recent trends. The trend of structural transformation in the last 15 years shows several relevant observations.

First, even in rural areas, both in Java and outside Java, the proportion of people employed in agriculture has been declining. Yet, the share of agriculture employment in Java in 2016 was similar to that of Java 15 years earlier. In rural Java, there seems to have been a slowdown in the rate of decline of agricultural employment in the last five to six years. For the last three years, it seems to have been stagnant at 47% of employment.

Second, there is no notable emergence of manufacturing industries in the rural areas. In the rural areas of Java, manufacturing employment was around 10% at the beginning of the 2000s and stayed at almost the same level for the next 15 years. A similar trend is observed in the rural areas outside Java Island. This is rather worrying in terms of finding optimal structural transformation. Manufacturing in rural areas is good for off-farm value-added generation, which uses agricultural products as its inputs. Agriculture-based manufacturing, even on a small scale, has the advantage of the better location of materials and the ability to generate employment.

Third, there has been a notable increase in the share of employment in the 'other services' sector. These services are mainly social and community services with very low productivity. In both rural and urban areas in Indonesia (in Java and outside Java, without exception) there has been a shift in employment from agriculture to low-productivity services sectors. The share of manufacturing employment in urban areas in Java has also been relatively stagnant and is even becoming slightly smaller in regions outside Java. The only sector where the relative size of employment is increasing is the 'other services' sector, which, again, is typically low in productivity.

Longitudinal data (such as the Indonesian Family Life Survey) that record the same individuals for different periods can help us gain a better view of the long-run structural

transformation. These data show several highlights.[3] First, most rural jobs are in agriculture, followed by services then industry. Second, people in rural areas change employment from agriculture to industry and services. However, many of those in rural industries and services revert back to agricultural employment. Perhaps this is the reason why the rural economy has remained agricultural for a long time. As we know that the urbanisation rate is rising in Indonesia, the typical nature of this urban–rural employment shift, where the movement is to sectors with not very high productivity, will tend to (but not necessarily) increase inequality in urban areas, and poverty reduction will become more challenging.

The abovementioned discussion shows that Indonesia is having difficulties and has not been successful in managing its agricultural transformation or its structural transformation. The most successful Asian economies have pursued an agricultural development-led industrialisation pathway (Briones and Felipe, 2013). A successful structural transformation is characterised by an agriculture transformation that through higher productivity provides food, labour, and even savings to the processes of urbanisation and industrialisation. A dynamic agriculture sector increases labour productivity in the rural economy, raises wages, and gradually eliminates the worst dimensions of absolute poverty. As Timmer (2014) pointed out, despite similar starting points in the late 19th century, Malaysia has followed Japan's successful experience of agricultural transformation, while Indonesia has lagged significantly behind. Recent trends suggest that labour moves from rural areas to urban areas yet is absorbed in the low-productivity services sectors. In realising the vision of more diversified economic activities, food security and improving the welfare of farmers is difficult without strategies to overcome these challenges.

Challenges in Improving Farmers' Welfare

The trend of the farmers' terms of trade – statistics measuring how farmers' income changes relative to their living costs – suggests only slow improvements over time. For example, during 2011–2018, while Indonesia's GDP per capita, a measure of the welfare of the average Indonesian, increased by around 20%, the farmers' terms of trade did not

[3] Suryahadi et al. (2018) carried out analysis using data covering 17 years from the Indonesian Family Life Survey.

change much. This was despite the many policies, programmes, and even large government funds directed towards farmers and the agriculture sector.

There are two main reasons why farmers' welfare has been experiencing stagnation in recent years. The first reason is the rise in the cost of living in rural areas, particularly in the cost of food products, as the majority of farmers' families are actually net consumers of food products. The data suggest that in recent years, the poverty line (which mainly contains food commodities in their representative basket) has increased faster than the general consumer price index. Farmers cannot keep up with the fast increase in the cost of living. Second, the increase in food prices is not directly translated even to the farmers who sell those commodities because of inefficient distribution. Higher prices for agricultural products benefit traders rather than farmers.

Both at the global level as well as in Indonesia, there is an increasing trend of protectionism. This poses another challenge to Indonesia's aspiration for the diversification of its economic outputs as a slowdown in world trade as a result of a globalisation reversal will narrow the market potential of Indonesia's products. Moreover, a food self-sufficiency agenda through protectionism is often incompatible with the food security agenda and farmers' welfare.

Indonesia–Japan Potential Areas of Cooperation

Rural development, in the context of agricultural transformation, as well as the more equal distribution of economic activities across the archipelago is important not only for more regionally balanced development but also for supporting inclusive economic development. When the rural areas, as well as the non-Java regions, become more developed through the development of higher value added, diversified economic activities, and more productive farmers, the tensions of the inequality-increasing structural transformation will be reduced, resulting in more inclusive economic growth.

In order to revitalise the rural economies, the rural and non-rural economies will need to be synergised. In the case of Indonesia, two types of economic linkages should be strengthened. The first is connectivity from rural to urban areas in general, and the second is connectivity from the predominantly rural non-Java regions to the predominantly urban

Java regions. Physical connectivity, such as through better roads and shipping lines, will open up more opportunities for the localisation of rural economies, such as transporting villages products to urban areas, or transporting people from urban areas to rural areas as direct consumers of agricultural products (such as visiting farmer markets) as well as consumers of agro-tourism in rural areas.

Indonesia–Japan Cooperation for Strengthening Urban–Rural Connectivity

In countries where successful rural revitalisation has taken place, such as in Japan, connecting the rural and urban markets has been a necessary condition. For example, in the process that is called 'localisation', i.e. the process of localising the reorganisation of the rural economy with new resources, new forms of human capital, and new channels is opened to the outside world. Ouchi (2009), using the example of Japan, described this as 'the next rural economy,' the third stage of the rural economy in Japan, after urbanisation and globalisation. He describes localisation as the process of opening new channels to urban consumers ('channel-isation from the local') and the new regional market ('place-isation to the local'). Channel-isation was advanced mainly by individual entrepreneurs and place-isation by collective efforts. Channel-isation is a new way to connect to urban markets, and place-isation is a new opportunity for urban spending to come to the rural areas.

Oichi (2009) stressed the important necessary conditions for this kind of rural economy revitalisation to take place. First, both processes depend on highly advanced transportation and communication systems. Therefore, infrastructure for connecting not only the rural and the urban areas but also farmers' markets and farmers is important. Secondly, technology plays a major role in supporting the place-marketing of rural areas by confirming the responsibility of farmers for their products. Thirdly, it is necessary to connect urban and rural areas physically, i.e. through transportation, and virtually, i.e. with the help of information and communication technology.

Therefore, there are at least three areas of cooperation between Indonesia and Japan that can be beneficial in supporting the rural economy revitalisation. The first area is developing the physical infrastructure to connect the rural and urban areas. This could be by building

or improving the existing urban–rural transportation network with any mode most relevant, such as land or rail transport.

The second area is improving or speeding-up the development and access to information and communication technology in rural areas. As can be seen from the previous discussion, the urban–rural gap is largest in these areas.

The third area is preparing the rural population to be ready for the more connected rural–urban economies through both formal and informal education and training. There are many examples of how informal education can help prepare the rural population to be more prepared for meeting the challenges of the rural economy's revitalisation. It is also important to note that this process can take some time to deliver progress. In Uchiko town in Ehime Prefecture in Japan, a town where rural localisation is seen as a world best practice (Ouchi, 2009), for example, the town opened a community school called 'the Intellectual Rural School' as a forum in which to consider the options for revitalising agriculture in Uchiko. The school head was the mayor, the students were citizens, and speakers were invited from outside the town to discuss issues like the branding of agricultural products, the regional circulation of products, economic opportunities for rural women, and so on. This is a good example of how education and training are areas where cooperation between Indonesia and Japan can be explored.

Indonesia–Japan Cooperation for Strengthening Connectivity from the Non-Java Regions to the Java Regions

As mentioned above, the population who live in rural areas in 2035 will live more predominantly in the islands outside Java, whereas Java will be more predominantly urban. Java's urbanised economy, then, could be a potential market for the rural non-Java economies. On the other hand, Indonesia also envisions less Java-centric economic development in 2045. Java's richer economy should translate into demand for non-Java's supply of their products, including those from rural areas. To facilitate this, Indonesia needs to improve connectivity between the Java and non-Java regions.

Areas of cooperation between Japan and Indonesia to be explored further may include but are not limited to such areas as inter-island transport and shipping and seaport

development and management. Moreover, Japan is more advanced in terms of adopting new technologies in the management of this area, and Indonesia can benefit from the cooperation. In addition, Japan also shares the characteristic of being an archipelagic country and so can share its experiences in improving connectivity. The cooperation can also extend toward the fisheries sector (where non-Java, particularly eastern Indonesia, has a natural advantage) related to high-technology adoption (such as stock monitoring, more efficient vessels, and so on) as well as in building maritime infrastructure that can serve the needs of the fishery industries.

Indonesia–Japan Cooperation in the Management of Rural Economy Revitalisation

Japan's biggest challenge in revitalising its rural economy happened just after World War II, particularly in the 1950s when rapid urbanisation started to take place. High economic growth in the 1950s led to rapid urbanisation, and the young population migrated to urban areas in large numbers. Japan's countryside regions were also urbanised. Both central and local governments intervened by facilitating industries to move from the concentrated urban areas to rural areas. As a result, the rural economy was transformed into having a dual structure of agriculture and industry (Ouchi, 2005).

The urbanisation challenge in Japan in the 1950s was more or less similar to Indonesia's of the past 15 years. However, as described in the previous sections, during this episode, non-farming activities, particularly high-value-added activities, such as in agro-industries, did not significantly emerge as industry's share in rural employment was stagnant from 2001 to 2016.

In Japan, this process of urbanisation and the dual economic structure in rural areas divided farmers into full-time farmers and part-time farmers. Full-time farmers enlarged the scale of their operations and adopted an industrialised approach, including modernisation, for production in order to be successful. Scaling up and modernisation need innovation and technical change. Science and technology play a bigger role at this stage.

Therefore, at least two key lessons can be drawn. The first is that the government (both central and local) plays a role in the facilitation of rural economy revitalisation, and the second is that agriculture activities become more productive through the increase in

landholding and modernisation through capital deepening and science and technology adoption. Today's more decentralised Indonesia still has room for the increased involvement of the provincial and local governments in the process of the revitalisation of rural development. Indonesia can learn from exactly how Japan has successfully done this, and both countries can explore areas of cooperation.

The challenges of urbanisation and other external pressures can be eased through the diversification of rural economic activities. Agro-industries and rural tourism have been developed in various rural areas in Japan. Building a profitable and sustainable tourism sector requires more than only financial investment. Building a tourism sector is akin to building a culture, as tourism involves not only businesses but also people (who live around the tourist areas, for instance) and consideration of how people interact with nature to ensure sustainability. Indonesia needs an integrated system of education (both formal and informal) and training in tourism development. Indonesia and Japan have large opportunities for mutually beneficial cooperation in the areas of tourism, particularly in rural areas.

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