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Building Malaysian Green Economy Model for Socio-Economic Development

Membina Model Ekonomi Hijau Malaysia untuk Pembangunan Sosioekonomi

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ABSTRACT

In the face of economic development, the gap between industrialized and developing countries are still large, and problems associated with the environment have crucially increased. Resource prices are rising and competition for scarce resources has also increased. This is a serious challenge especially for countries that are experiencing industrialization and rapid economy growth like Malaysia. In fact, the environmental, social and economic dimensions are reflected in the green economy concept. Malaysia's national green economy framework attempts to strengthen the economy through incentives, tax, pricing, regulating and investments. However, it is mostly focused on industries located in urban areas and the social dimension is not clearly made in terms of program and policy tools. This paper introduces a conceptual framework to create Malaysian green economy model for socio-economic development and indicates the endogenous links within and across the economic, social and environmental sectors. It defines pathway to sustainable development which is about government intervention that helps the economy to determine the technological changes. This study is therefore an overview of the initiatives and opportunities for green economy implementation in Malaysia.

Keywords: Green economic; socio-economic; policy implementation

ABSTRAK

Dalam menghadapi pembangunan ekonomi, masih terdapat jurang antara negara-negara perindustrian dengan negara-negara yang sedang membangun dan masalah-masalah yang berkaitan dengan persekitaran telah bertambah dengan mendadak. Harga sumber meningkat seiring dengan persaingan untuk sumber yang terhad. Perkara ini merupakan cabaran yang serius terutamanya untuk negara-negara yang sedang mengalami perindustrian dan pertumbuhan ekonomi yang pesat seperti Malaysia. Hakikatnya, dimensi persekitaran, sosial dan ekonomi dicerminkan dalam konsep ekonomi hijau. Rangka kerja ekonomi hijau negara Malaysia dilihat dapat mengukuhkan ekonomi melalui insentif, cukai, harga, mengawal selia dan pelaburan. Walau bagaimanapun, kajian ini lebih tertumpu kepada industri yang terletak di kawasan bandar dan dimensi sosial tidak dibuat dengan jelas dari segi program dan alat dasar. Kajian ini memperkenalkan rangka kerja berkonsep untuk menghasilkan model ekonomi hijau Malaysia untuk pembangunan sosioekonomi dan menunjukkan pautan dalaman merentasi sektor ekonomi, sosial dan alam sekitar. Ini menentukan laluan kepada pembangunan lestari iaitu mengenai campur tangan kerajaan yang membantu ekonomi untuk menentukan perubahan teknologi. Justeru, kajian ini merupakan gambaran keseluruhan tentang usaha dan peluang untuk pelaksanaan ekonomi hijau di Malaysia.

Kata kunci: Ekonomi hijau; sosioekonomi; pelaksanaan dasar

INTRODUCTION

At the global and national levels, attention is being given to the green economy development. Many countries are promoting a green economy which is a clean and energy efficient economy. United Nations Environment Programme (UNEP) defined green economy as "one that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities." It also could be thought as one which is low carbon, resource efficient and socially inclusive. In fact, it is the means of achieving sustainable development (UNEP 2011).

The concept of green economy covers several issues of sustainability. The green economy has capability to effect transformative and substantive change towards sustainable development (Borel-Saladin and Turok 2013). Moving towards a green economy helps to reduce environmental damages and increase benefits of natural capital. Achieving a green economy needs accounting for the contribution of nature to Gross Domestic Product (GDP) and assessing capital allocations, incentives, markets and development indicators.

Malaysia obviously needs a fundamental shift towards a green economy. This would not be easy, because of heavy dependency on the petroleum and timber industry which has significantly eroded Malaysia's ability to remain economically sustainable. Degradation of natural resources generates a poverty trap, which causes a reinforcing loop of further degradation and worsening poverty. Hence, Malaysia needs transformation to the green economy model that is more socially equitable and environmentally reasonable.

This paper offers a framework to build Malaysian green economy model for socio-economic development and provides a basis for recognizing the interactions between economic, social and environmental factors. Malaysian national green economy framework is mostly focused on industries in urban centers and the poor communities living in the rural areas are not targeted. Since poverty is still a main challenge in Malaysia's rural area, focusing on green economy for socio-economic development with target of poverty alleviation and job creation would be essential.

A FRAMEWORK FOR A MALAYSIAN GREEN ECONOMY

Based on sustainable development concept, the economy is not separate from the environment in which we live. Because the way we manage the economy impacts on the environment and the environmental quality impacts on the performance of the economy. In green economy, the economy considered to be a component of ecosystem.

The process of greening Malaysia's economy had started around 1970s with introducing the regulations to manage pollution from the palm oil industry. Malaysia's policy framework in energy development gradually developed by focusing on fossil fuel supply in the 1970s is to a diversification of supply sources (renewable energy) by the year 2000. In 2009, Malaysia introduced a new development policy framework called the New Economic Model which outlined the goals of inclusiveness, high income and sustainability to lead Malaysia to a high income country by 2020. Malaysia has also introduced the systematic architecture to respond to the green economy agenda (Hezri and Ghazali 2011).

From 2009, some policy instruments and statements have been introduced to achieve the Malaysia's green economy goal. They are as follows: introduction of ministerial portfolio in the federal administration, formulation of a national policy statement on green technology, establishment of an implementing agency, formulation of an inter-ministerial council as a decision making body on green technology, registration of a green building association, initiation of a green financing scheme, launching of the green township framework, introduction of green procurement in all government agencies, and formulation of legislation to promote renewable energy and the corresponding quantitative targets.

Malaysia's approach to achieve green economy follow a conventional economic framing such as UNEP and Organization for Economic Co-operation and Development (OECD), by focusing on economic parameters such as regulation, investments, incentives, tax, and pricing (Hezri and Ghazali 2011).

MALAYSIAN GREEN ECONOMY FOR SOCIOECONOMIC DEVELOPMENT

The first step to build the Malaysian green economy model is the identification of the need for developing the green economy and the existing features of green economy development in the country. A key feature of a green economy is that it attempts to provide various opportunities for economic development and poverty alleviation without eroding a country's natural assets. Hence, for shifting to a green economy, attempting to obtain growth from environmental investment targeting poor communities should be the key component.

Figure 1 shows a causal loop diagram of Malaysian green economy model for socio-economic development. This diagram indicates interrelationships among components of the model with application of policy options. Each arrow in this diagram shows the effect of one element on the other. If increasing one element causes another to increase, the effect is considered positive (+), or negative (–) in the opposite case. This is an economic growth model which is linked to social and environment. In this diagram, there are three main indicators, namely, socially inclusive (such as poverty level and green jobs), low carbon energy (such as Green House Gas (GHG) emission and energy efficiency), and resource efficiency (such as natural capital and green GDP). This diagram could

later be used to simulate and analyze the Malaysian green economy development under different policy scenarios. However, simulation and policy analysis are not the intention of this paper.

This model is based on the green economy concept that believes the growth of economic capital which consumes the social and environment capital should return back by investing in social and environment capital. The investment in social capital would enhance awareness to conserve the environment. The environment could also support the growth of quality of life in the social capital. Based on UNEP (2011) report, the benefit flows from natural capital are received by the poor and vulnerable communities. It believes that a green economy could recognize the value of, and invests in, natural capital for sustainable development. It also helps to indicate the value of natural capital as a provider of human well being, supplier of livelihood of poor households, and a source of new jobs. For instance, biodiversity leads to human well being and provides a valuable ecosystem services. Forests as natural capital are the part of ecological infrastructure which also supports human well being. Increasing forest restoration and reducing deforestation may support rural livelihoods and make a good economy sense. Forest restoration could increase the value added in the forest industry, enhance employment in this sector, increase carbon sink, and reduce the GHG emission.

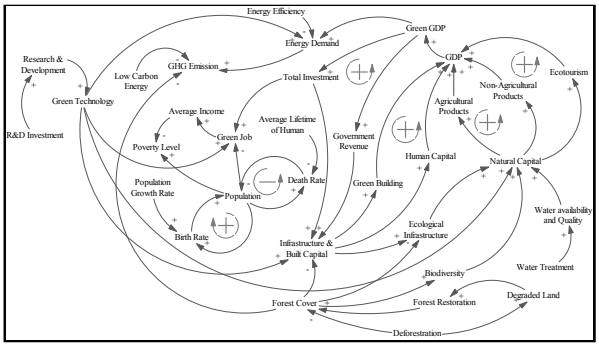

FIGURE 1. The causal loop diagram for Malaysian green economy

Water as a basic ecosystem services could also be green by investments in infrastructure and water policy reform to ensure that enough quality and quantity of water are provided for both people and ecosystems. Investing in natural capital may help to increase the agricultural and non agricultural products and therefore increase the GDP and reduce the poverty in the country. On the other hand, developing of green economy in agricultural sector may importantly reduce poverty in rural area, ensure the food security issue, and improve well-being by promoting the green jobs.

Since environmental resources and ecosystem services are the critical attractions for tourists, investment in natural capital could also improve the ecotourism sector. In Malaysia, tourism industry is growing very fast and contributes to the economic enhancement as well as generates employment opportunities. Green tourism would increase the local community involvement in the tourism value chain. It supports the local economy and therefore reduces poverty. Thus, the trend towards green tourism should also be considered to make sure that the current tourism products could generate economic return in the long term. In this diagram, the green GDP terms is used. Because GDP is computed at market prices and it ignores externalities, especially environmental ones. It does not measure some important things in our economic well being such as clean air and water (Van den Bergh 2007). In this model, since the value of natural capital (e.g. biodiversity, ecological infrastructure) is considered, the green GDP terms could be applied. The two important green policies that incorporated in this model are adoption of energy efficiency and promotion of green technology for achieving low carbon emission, green jobs and poverty alleviation.

ENERGY EFFICIENCY

The energy efficiency is one of the important elements in Malaysian energy policy framework. Investments in energy efficiency and renewable energy may help to improve the efficiency and productivity of environmentally friendly technologies. It also helps to reduce the energy intensity and adverse environmental impacts. In other words, energy efficiency program reduces the energy consumption per unit of production and therefore it causes the lower operational cost. Implementation of energy efficiency project would also mitigate GHG emissions by improving energy management and reducing energy consumption in the residential building sector and therefore cleaner environment. Buildings consume a large share of the energy supply and it leads to increase GHG emission. Designing the energy efficient buildings plays an important role in mitigating climate change

and shifting to a global green economy. Green building provide some direct social benefits, such as improved health, quality of life and productivity of those living and working in them, and job creation in construction, maintenance and the supply of energy, water and sanitation (UNEP 2011).

Allocating the GDP to increase energy efficiency and development of the use of renewable energy would also create green jobs, while delivering strong economy growth and reduced emission. Malaysia has allocated the large investments in renewable energy, energy efficiency and Research and Development (R&D) projects. Various government initiatives have been established to encourage industries to use energy efficiency equipment and products (MIDA 2012). Malaysia is making its institutional capacity stronger to develop energy efficiency by designating the Energy Efficiency and Conservation Agency Malaysia (EECAM). This agency would implement the energy efficiency program (APEC 2011).

GREEN TECHNOLOGY

The Malaysian national green technology policy (NGTP) which introduced in July 2009 shall be a driver to accelerate the national economy and promote sustainable development. It is launched by Prime Minister of Malaysia, with objectives of minimizing growth of energy consumption while improving economic development, facilitating the growth of the green technology industry and increasing its contribution to the national economy, enhancing national ability and capacity for innovation in green technology development and increase Malaysia's competitiveness in the global arena, ensuring sustainable development and conserve the environment for future generations, and finally, increasing public awareness on green technology and encourage its widespread use. The energy efficiency and renewable energy will be also promoted and supported under this policy (NGTP 2009). NGTP tries to develop and improve the major sectors such as energy, buildings, water and waste management, and transportation. Moreover, it tries to progress and improve R&D, innovation and commercialization through collaboration with local and multi-national companies (Chua and Oh 2011; Jackson 2009)

The government aimed to provide education and awareness in the area of green technology to every one through different activities. They are also trying to set up a green bank and make green financing more accessible. The government has started some basic and feasible fiscal and financial green technology development incentives. They are also promoting more R&D efforts through financial grants, establishment of an effective coordinating agency for research development and innovation, smart partnership between government, industries and research institutions, and strong linkage between local research institutions and international centers of excellence in green technology research, development and innovation. For effective implementation of green technology policy, Malaysian government planned to establish a green technology council among ministries, agencies, private sectors, and stakeholders. The government is working on the green technology roadmap to guide Malaysia towards a low carbon economy which the main focus is on energy, waste water, building, transportation, and manufacturing (Gee 2012).

Malaysia has committed to reduce its carbon emission intensity per GDP to 40% by the year 2020 compared with its 2005 levels, subject to assistant from developed countries. In 2009, the Malaysian government established the basic architecture for green economy by incorporating a green technology portfolio into the Ministry of Energy, Green Technology and Water. This was followed by a suite of interventionist policy instruments. However, Malaysia's approach raises the question whether the full range of social, economic and environmental goals is considered in its policy objectives, since a strictly economic approach to sustainability risks marginalizing the social equity aspects of green economy (Hezri and Ghazali 2011; Porter and Van der Linde 1995). In fact, green technology could open up new industrial sector and the new industry would create green investments and green jobs which in the end develop green economy.

POLICY IMPLEMENTATION

For policy formulation, visualizing the pathways to green economy is very important. There are four main world views on the policy path to a green economy. First, from market liberals' point of view, the economic growth creates higher incomes, which can improve environmental conditions and market. Institutionalists almost agree with market liberals' opinion, but stress the need for stronger national and global institutions with much improved global

cooperation. Bio-environmentalists emphasize the biological limits of the earth to support life due to population growth. Finally, from social greens point of view the globalization leads to environmentally destructive growth, breeds injustice, and inequality domination of the poor by the global rich. The policy instruments for each of these approaches could be different. However, most of policy approaches aims to improve the functioning of markets. Basically, in well-functioning markets, prices indicate the relative scarcity of the resources and consumer preferences, but it may fail to capture the effects of environmentally damaging activities (Sampson 2011; Hall and Vredenburg 2003).

UNEP believes that there is a need to "phase out harmful subsidies, reforming policies and incentives, strengthening market infrastructure, introducing new market-based instruments, redirecting public investment, and greening public procurement" to meet a green economy (UNEP 2011).

Capacity building, information exchange and experience sharing will be critical for implementing the green economy policies. Policy implementation and decision making should be taken by government to green their economies. For instance, identification of priority sector and selection of the most suitable policy instruments to deliver desired outcome. They should consider the different risks, costs, benefits, and opportunities of various policy options based on their institutional and governance arrangement, level of development, and social, economic and environmental priorities (UNDESA 2012).

UNDESA (2012) in its report classified the green economy policies in 6 categories of internalizing (such as taxes and cap-and-trade permit), incentivizing (such as investment incentive and subsidies) institutions (such as regulations and governance & institutional), investment (such as investment in sustainable agriculture and in natural capital), information (such as voluntary approaches and measuring progress), and inclusion (such as labor market policies and social protection floors).

Governments as policy makers need to establish clear targets to analyze synergies and trade-offs between different policy options to achieve their targets, to design and implement policy options, and to monitor progress. In developing countries, it may be very challenging due to the lack of institutional capacity, enough data and information, and access to financing and other resources that are needed for successful policy implementation (UNDESA 2012).

In fact, implementation of green economy policies provides a new way to integrate the three dimensions of sustainable development. Ecosystem management plays a main role in implementation of green economy policies. Because ecosystem management secures ecosystem health and sustains delivery of various ecosystem services to ensure different aspects of green economy such as poverty alleviation, job creation and social equity, resource and energy efficiency, and response to climate change. Hence, increasing eco-investment and the number of eco-cities could be the two main approaches for implementation of green economy policies and application of ecosystem approaches and their integration (Liu et al. 2012; Wever et al. 2010).

CONCLUSION

This paper has attempted to provide a framework for thinking about the elements of pathways to green economy. It has framed the issue of investing in natural capital, energy efficiency and green technology, to improve the socio-economic dimension of sustainable development. Greening the economy could increase wealth, economic growth, proper employment, reduced poverty, and social equity. The sustainable natural capital supports the poor communities that are more dependent on nature for their income and livelihood. In transition to green economy, green jobs would be created. However, there is a period of job losses in transition that needs investment in re-skilling and re-educating the workforce. As Malaysia is moving towards a more extensive implementation of green development, the green initiative needs more support from all the stakeholders. Government intervention which supports the economy in determining the direction and level of technological changes plays a crucial role in determining the future nature of the Malaysian economy.

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