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Economic and Fiscal Policy Strategies for Climate Change Mitigation in Indonesia  
Ministry of Finance, Republic of Indonesia  
Australia Indonesia Partnership



Critical review

Mini Business Economics Workshop

Global warming and its effects; climate change, has always been a big problem worldwide. The issue itself has had a large impact on our own country; Indonesia, where climate change is considered as a high priority issue. Due to these discoveries, one of Indonesia’s leading minds; Dr. Sri Mulyani Indrawati, the Minister of Finance has agreed on collaboration with Australian experts in creating this Green Paper. As one of the most affected country in the world, Indonesia is committed to making a significant change in the efforts of limiting the emissions of greenhouse gases and to help make a global climate change agreement possible [page 1]. However, to ensure that Indonesia's efforts are not wasted in vain, they must ensure that their climate change developments are consistent with their development and reduction objectives.   
  
The Green Paper itself is in fact a collection of various strategies that is created by both Indonesia’s Minister of Finance and Australian experts. The paper identifies economical and fiscal policy strategies for climate change mitigation; a way to reduce the emission of carbon dioxide and other hazardous gasses, in the most cost effective way possible. The Green Paper presents strategies that can guide long-term policy reforms for climate change migration; which includes a move to pricing carbon emissions. It sets out a concrete plan to create incentives for both the government and the country's citizens in order to reduce carbon emissions.

There are 4 main strategies to the Green Paper [page 2] and although having different approaches and implementation methods, all 4 strategies aim to create a change in Indonesia to ensure that the country works towards a carbon-constrained future. Ideally, all these strategies should be used in unison to create an environment where the emission of carbon dioxide is carefully monitored and measured to better the environment. However, these strategies are only often applied to the largest area of carbon emission in that country in hopes that by reducing the biggest emissions the overall status of the carbon emission will decrease. In Indonesia's case, our country's emission profile is currently heavily dominated by land-use change, forest degradation and peat fires [page 3]. However, in the recent years, Indonesia's emissions have increased heavily; due to high increases in the energy-sector. Due to these changes, an integrated policy effort across all sectors would be required for an efficient outcome, instead of using specific reductions in each sector.   
  
As the years go by, our world gets increasingly narrowed in terms of carbon-finance; where expansions are likely to occur in both the public and the private sector in order to support the climate change mitigation in developing countries [page 46]. Indonesia is no exception; where it currently accounts for less than 2% of the Clean Development Mechanism market with the opportunity to attain 10% of larger future carbon finance flow. Despite the popular opinion, attracting carbon finance to Indonesia is not a hopeless effort; instead it can help to assist Indonesia in preparing for a low-carbon future. The Green Paper then offers several international strategies that are based on the agenda of supporting long-term economic reform and development objectives [page 5].

As a developing country, Indonesia continuously grows in every sector; this includes the energy sector where the total energy demand is growing by 7% each year seeing as the energy and transportation sector grows, so does the household sector in the country. As the demand increases exponentially, the supply in the country struggles to keep up with it, but there are several forecasts indicating that as long as Indonesia continues to develop, the demand will simply continue to rise. This large influx in the energy sector is heavily due to the increased reliance on coal for electricity generation; coal is heavily relied on because by using coal Indonesia will be able to reduce their dependency on foreign oil imports, as coal is seen as the cheapest source of electricity. This is why various Green Paper strategies stress on the use of carbon pricing [page 6]. By introducing the carbon pricing the country can ensure that through time the public will shift from high-emission activities to low-emission activities. To help better the idea of carbon pricing, it is stated that once the carbon measurements and accounting systems are able to draw in potential market participants and support emission pricings the carbon tax can then be replaced by emissions trading.

The financial mechanism that would need to be applied relies heavily on both technical and strategic considerations in which the country will need to decide on using their public finance; which would allow them to receive financial support without needing to identify their baseline [page 48] or to apply carbon market finance that is a highly advantageous method; as they provide premiums for various developing countries [page 48].

As an example of magnitude, the initial carbon tax could start at Rp. 80,000 per tonne of CO2, rising by the rate of 5% per annum until 2020 where it is measured to have reduced the emissions from the energy sector by 10% [page 7]. Another solution to reduce the carbon emissions in developing countries, involves the application of geothermal electricity, where energy is generated from the Earth’s natural heat [page 131]. The usage of geothermal electricity is expected to help Indonesia meet the rising demand for energy as Indonesia seems to have a lot of promising and significant geothermal fields [page 132].

Considering the option of implementing carbon pricing, Indonesia’s proposed parameters have set a target to reduce emissions by 2020 from fossil fuel combustion; carbon tax and permit can be used to provide cash transfer to the poor to offset price increases and create incentives [page 76]. The reformation process of the energy sector will take time and effort and until the process is completed, several transition policies will need to be set into place. However, as the goal is to reduce all distorting subsidies it is vital that the compensating subsidies are also stopped at the same time the existing subsidies are halted [page 77]. The Minister of Finance herself will be heavily involved with these changes [page 18], however these changes will certainly be a challenge for development and economic reform.

One strength of this paper is that, the date presented is displayed in an orderly manner and is categorized properly as per topic. The data presented is also explained clearly and thoroughly in a way that the people involved or interested will be able to understand the data without being too involved with the project. The paper had begun by explaining the topic it will be discussing, along with what the Green Paper actually is [page 1] before it branches off into related topics that concerns the carbon tax policy Indonesia plans to apply [page 5]. Alongside is clear-cut explanations, the data given in the Green Paper is also divided into graphics to further ease the reader’s understanding of said data, as an example, numerical data explained in the paper which includes the estimation of emissions from land-use charge, forestry and peat fire, the projection of Indonesia’s greenhouse gases emissions, etc. [page 4 and page 21].

Another strength to this paper, is that the strategies it has presented is highly varied and diverse, as it is backed up with data not only from Indonesia itself but also from other international countries such as China, Mexico, Norway, etc. [page 62]. This ensures that the strategies proposed by the Indonesian Green Paper are made through well-rounded decisions and has several references it can compare its strategies to; therefore ensuring that the strategy planes and created is relevant and effective to the Indonesian environment and present situation. From the given data, Indonesia will be able to make the best choice after reviewing and consulting the given examples with their original objective, limitations, strengths and current market status. Therefore, ensuring that the chosen strategy will work well, especially when accounted with the international support that Australia and other countries in Asia-Pacific is willing to give to Indonesia in terms of REDD activities [page 65]. The strategies suggested is also specifically directed towards Indonesia’s largest cause of greenhouse-gases emissions, and are concerned in creating a new energy source for the coal-based country

However, the data presented in this paper can be highly criticized in terms of the large influx it is displayed in, this can be highly confusing for its readers; especially if said readers do not have a background in economy or the country’s current conditions financially and in terms its carbon-emission [page 19]. Although, very thorough and detailed, the Green Paper requires its readers to be at the very least, aware of the current conditions in Indonesia and for its readers to have some semblance of knowledge in economics and its policies.

Another issue with the Green Paper involves the theories it has presented and the chances of them creating a significant change in Indonesia. Although the strategies seem pretty effective at first glance, the Green Paper somewhat fails to take into account the all the possible affects implementing these strategies would have on the country’s economy. Especially since the new policies that would help reduce carbon-emissions in Indonesia would increase forestry-derived non-tax government revenue [page 121]. Not to mention the chances that Indonesia might need to conduct an institutional reform especially when deciding where climate policy might be best situated in Indonesia. However, there is no concrete guarantee that even such methods would produce a notable change; seeing as a decree to reduce greenhouse gases emissions by 26% in 2020, and up to 41% if developed countries provided finance or other support [President Susilo Bambang Yudhoyono, 2009]. However even with the placed decree, there were only little changes in the country’s greenhouse gasses emission to be seen; which may mean that the decree was not quite effective. For example, WRI Indonesia came up with the figure by using carbon emission reduction evaluation and monitoring documentation from 34 provinces, which was submitted to the National Action Plan on Reducing Greenhouse Gas Emissions (RAN-GRK) secretariat at the National Development Planning Agency (Bappenas) [JakartaPost, showed that Indonesia succeeded in reducing its carbon emissions by 15.5 percent from 2010 to 2015. And yet, according to WRI Indonesia analysis, there is much contradiction between regional government development programs and their greenhouse gas reduction programs.

The Green Paper also poses a slight problem in terms of applying Indonesia’s geothermal resources to generate energy for the country seeing as despite being the largest in the world, with 299 geothermal locations and a total potential of 28,807 MW, or around 40 percent of the total geothermal resources worldwide, according to a September 2014 press release from Indonesia’s Directorate General of Geothermal. The Indonesian geothermal sector is still underdeveloped; primarily the result of a number of outstanding challenges that have not yet been resolved by the GOI, particularly with respect to the feed-in tariff of geothermal electricity which many investors consider unattractive in view of the high capital requirements needed to develop a geothermal working area in Indonesia. Therefore, the strategies to divert Indonesia’s energy generation from coal usage to geothermal energy will be quite the challenging feat.

Overall, ‘Economic and Fiscal Policy Strategies for Climate Change Mitigation in Indonesia’ contains a lot of thought-out and diverse plans that Indonesia might be able to implement one day in order to reduce their carbon and greenhouse-gases emissions. The invested parties in this research have also highlighted a lot of valid-points in terms of effective strategies that would reduce the country’s carbon emissions across its various sectors all the while ensuring that the country would thrive despite the changes (both policy and non-policy wise) that might occur. However, as it was pointed-out, the paper also has several flaws which includes the plan to utilize Indonesia’s dormant geothermal energy to lessen the nation’s dependency on coal generation; Indonesia’s main and largest source of energy. Along with the likelihood of these strategies creating a remarkable change in the country and its effectiveness especially when it concerns the Indonesian government and institutional reforms which might unbalance both the public and Indonesia’s markets. In conclusion, the Ministry of Finance and the Australia Indonesia Partnership has indeed succeeded in accentuating factors that has led up to Indonesia’s current status as the one of largest greenhouse gases emitter worldwide and drawing worldwide attention to this issue.

(2060 words)

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