

Implementing Environmental Economic Instruments in Indonesia: Constraints and Challenges

Siti Ruhama Mardhatillah^{1*}

¹ *Administrative Law Department, Universitas Islam Indonesia, Yogyakarta, Indonesia*

* *Corresponding author. Email: titilaw10@gmail.com*

ABSTRACT

Command-and-Control (CAC) is a classic environmental protection instrument that many scholars told had never been effective nor efficient to reduce environmental damage. Hence, economic instruments (EI's) becoming more popular since its ability achieving environmental target in more efficient way and providing financial incentive for those who have performance of environmental protection more than what've been targeted. However, some scholars revealed that EI's are not compatible for environmental protection of developing countries due to several required circumstances for effective EI's implementation that are generally becoming the main constraints for developing-countries. This paper will examine about what the constraints and challenges are probably faced by Indonesia in attempting of EI's implementation and relating such constraints and challenges with recent condition of Indonesia. This is juridical normative research conducted by collecting the data through library research and using conceptual approach by analyzing some related theories toward Indonesia recent circumstances in EI's implementation agenda. The findings are insufficient capacities of government officers, corruption, and lobbying from interest groups becoming the main constraints, while the challenges are reforming several policies regarding incentive and disincentive such as the subsidy allocation for fossil fuel consumption and creating a new market for trading of emission permit.

Keywords: *environment, economic instruments, constraint, challenges, Indonesia*

1. INTRODUCTION

It often seems that businesses activities will object to any mandate to improve the environmental performance of their operations, claiming it represents a direct threat to their ability to stay in business and provide jobs. At the same time, it seems that many in the environmental communities believe that economic growth always comes at the expense of the environment [1]. The common issues regarding the economic interests and social interests is what economist called as negative environmental externality that will led to "market failure", a condition where environmental adverse arising due to business activities and are not reflected by prices of goods and services, or in the other words, societies tend to be imposed spending their own money to recover the environment (social costs). For tackling those conditions, economists argue that it should be addressed by government's interventions in order to encourage changing the behavior of business operators by providing economically incentive and disincentive.

Since the many idea of ways to integrate economic growth with environmental protection and ideas to internalize negative externalities, there are three main environmental management strategies so far developed to deal with the environmental quality concerns: command-and-control (CAC) strategy, voluntary measures strategy (VM) and economic instruments (EI) or market type environmental

management tools strategy. The last-mentioned instrument is a type of instruments that allowing the government to intervene the market that will influence costs of products and services due to the environmental performance on production process by using some instruments such as: taxation / levy, tradable permit system, deposited refund system, subsidy / incentive, liability and compensation, ecolabelling and green procurement etc. [2].

Moreover, the implementation of economic instruments in several developed-countries (USA and European countries) leads to the more efficient environmental target achievement within more flexibility for firms to develop their own ways for achieving targeted environmental standard rather than using command-and-control which has little flexibility and no incentives provided for operators who are able reducing pollution beyond what've been targeted [3]. This idea has been followed by many developing-countries including Indonesia by issuing Government Regulation Number 46 Year 2017 on Environmental Economic Instrument that has been mandated through in Act Number 32 Year 2009 on Environmental Protection and Management.

However, to implementing economic instruments effectively, certain circumstances becoming some requirements that are usually main obstacles faced by developing countries. Three main constraints can be briefly mentioned as insufficient of government officers, corruption, and potential lobbying from interest groups. The constraints will be further discussed using Indonesia's conditions perspective and thus, can find some challenges what may be faced by the country.

2. THE DIFFERENCES BETWEEN EI'S AND CAC

2.1. Definition

Environmental protection always confronts two major interests, industrial interest and environment protection itself. That is why every government has been playing a significant role to make sure there is no adverse effects to the environment due to business activities by regulating what the business sector must and must not do. Usually, there are two main forms: (1). technology standard that specify the type of equipment or processes that each industry must adopt; (2). performance standards that identify an environmental or technical target, but allow flexibility in how targets are achieved [4]. These kinds of method are very well known as command and control regulation (CAC).

Many studies have stated that environment protection through CAC method has never been effective nor efficient to avoid environmental destruction and pollution. In developed-countries, there is a very well-known method, known as market-based instruments (MBI's) or in the other name is economic instruments (EI's). These instruments have been recognized and implemented by many countries due to its flexibility and efficiency for achieving a desired environmental outcome. Economic instruments for environmental protection are policy approaches that encourage behavior through their impact on market signals rather than through explicit directives regarding pollution control levels or methods or resource use [5].

The term of EI's has been defined by the Organization for Economic Co-operation and Development (OECD 1991) as "instruments that affect costs and benefits of alternative actions, open to economic agents, with the effect of influencing behavior in a way which is intended to be favorable to the environment".

EI's idea comes from the one of principle in Article 16 of the Rio Declaration which is named as Polluter Pays Principle that states: National authorities should endeavor to promote the internalization of environmental costs and the use of economic instruments, taking into account the approach that the polluter should, in principle, bear the cost of pollution with due regard to public interest and without distorting international trade and investment.

2.2. How the EI's and CAC Work on Environmental Protection

As what has been revealed by many experts that whether in developed or in developing countries, EI's have generally played a supporting role to environmental regulations, not taken their place. It is the same with what as in OECD countries, the basic policy framework in all these countries is a regulatory one and EI's are generally designed as complements to regulation [6].

For an effective environmental management all these strategies should be utilized in a harmonized manner depending on the strengths and weaknesses of the

surrounding economic, social and institutional circumstances of the societies such as availability of financial funds, status of internal market and citizen awareness over environmental issues. Individually all of these strategies do have their own superiorities and disadvantages as a tool to upgrade the environmental quality and to maintain it [7].

In achieving a workable policy mix, it is important to view EIs not as a sole solution in all circumstances, but as one component of a wider policy package, complementing rather than replacing existing CAC policies. Much of the challenge of choosing and implementing an appropriate policy solution comes in how to weave more flexible EIs into the existing policy and institutional conditions in the country. For example, CAC regulations are often used to set the broad parameters (e.g., total emissions, licensing requirements, etc.) under which EIs can be used to obtain a more efficient allocation of responsibility and compliance across firms. Because EIs can complement rather than replace many CAC policies [8].

3. CONSTRAINTS AND CHALLENGES

3.1. Government Administration Staff Capacities in Decentralization Era

As Indonesia has implemented decentralization government since reformation era in 1999 which prior government system had heavily centralized. Hence, it is not an easy task to perform local government staff capacities especially in a newly decentralized country which is used to be centrally controlled. The levels of difficulties are arranged from providing sufficient level of capacity of human resource at the local level while at the same time preserving national standards of service delivery [9]. While the implementation of EI's requires strong decentralized government to control enterprises regarding their compliance over standard set and ensuring they do not emit more than what've been permitted.

Hence, the responsible institution will need adequate capacity to carry out an additional set of highly sophisticated activities. Some of the advantages of decentralized environmental policies are based on technical characteristics that are unique to each jurisdiction or region, while others rely on heterogeneity of tastes among jurisdictions' population [10]. Moreover, EI's implementation also needs strong decentralized government due to the decentralized permission and its supervision toward enterprises that are located in region areas. Hence, the high level of local government capacities becoming a crucial thing to successful implementation of EI's.

How the recent government capacity is reflected through a simple task of environmental permit enforcement, for instance. When authority for enforcement has been decentralized then local governments have the equal authorities with central government either in issuing the permit or imposing punishment if any breaches, but in fact, local governments only have efficient authority for issuing the permit, while imposing punishments is conducted by

central government. Thus, environmental administrative management and legal enforcement still rely upon the central government. The three years report shows that administrative law enforcement regarding environmental permit in region were conducted by central government: 4 punishments of revocation of permit, 21 freezing permits, 206 government coercions, 23 written warnings, and 115 warning letters [11].

Leaving aside the cultural factors, the institutional capacity literature suggests that countries should build local capacities before implementing direct economic instruments.

3.2. Corruption

As its function as both environmental protection and with the same time collecting charges as internalizing the externalities, implementation of EI's lead to the requirement for low corruption index in any government level. Ideally, charges collected should be allocated for environmental conservation. Usually, the low level of corruption is hand-in-hand with the high performance of bureaucratise, thus the first problems as insufficient capacity of government officer leads to opportunistic behavior.

Corruption in Indonesia is still endemic in all three branches of government (Bertelsmann Stiftung 2018). In 2017, Indonesia ranked 96 out of 180 countries in Transparency International's Corruption Perception Index (CPI), with a score of 37 points out of 100 (Transparency International 2017a). Yet the level of corruption seems to be declining. Between 2012 and 2017, Indonesia's CPI score improved from 32 to 37. Similarly, the World Bank's Control of Corruption Indicator moved from -0.64 to -0.39 on a scale ranging between -2.5 (worst) and 2.5 (best) [12]. Data from Corruption Perception Index (CPI) shows that Indonesia has position in group 1 (high level) classification which has 2.47 of index [13].

Bureaucratic corruption is rampant in Indonesia, where one in seven citizens reports paying a bribe to access utility services, and one fourth of citizens report having paid a bribe for ID documents. Overall, the quality of service delivery in Indonesia is low, and corruption negatively impacts development at all levels, especially concerning infrastructure and the provision of clean water [12].

In addition, corruption level goes hand-in-hand with the level of environmental sustainability. The risk of corruption demonstrates how the cost of weak institutions on environmental quality can be high. Quantitative analysis of corruption indices developed in conjunction with the Environmental Sustainability Index found that environmental sustainability had the highest correlation for all of the variables tested. The higher the level of corruption, the lower the level of environmental sustainability [8].

Moreover, one endemic corruption factor in Indonesia is caused by decentralization decision-making process that becoming one of requirement to be effective implementation of EI's. The other corruption factor that directly relate to another constraint -influence of lobbying group- is powerful domestic vested interests that create the ideal breeding ground for corruption. On the other hand, the

complex regulatory framework allows public officials in charge of its implementation to exploit loopholes and ambiguous legislation to extort informal payments and bribes from companies in the process of registering a business, filing tax reports or obtaining permits and licenses [12].

Whereas, where a country suffers from low administrative capacity as well as corruption problems (both endemic or opportunistic), the use of flexible instruments that rely upon administrative capacity and involve the transfer of funds, as in environmental taxes and emission trading, are likely to be less effective than command-and-control-type instruments [14].

The lack of capacities and the high level of corruption particularly in government body are the reasons why environmental protection strategies should not be placed by heavily relying on government decision. While implementation of EI's provides a wide space for government discretion to make some decision to each firm about the standard set up and ensuring enterprises compliance.

3.3. Influence of Lobbying Groups

As EI's requires some standards to be set, it is crucial that standards are set in public and environmental interest. Thereby, one of the most important factors that will strongly influence the effectivity of EI's implementation is integrity of government officer. As external (illegal) influences are possible at all levels of government, decision making should occur where it is most likely that standards will be set in the public interest. A well-known problem with the decentralization of standard-setting power to local governments is that local authorities are often particularly vulnerable to lobbying by industrial interest groups as a consequence of the controlling role that such groups often play in the socio- economic interests of local communities [19].

Several literatures conclude that if enterprises have significant role in developing of region it will be difficult to strictly enforce standard because of built up-interests. Moreover, in Indonesia, it easy to find that rulers in certain regions have direct relationship with regional firms or even they are a part of the owner of enterprise's capital and also hold many of regional government projects.

PT. Bali Pasific in Banten province is known as a corporation leaded by a Mayor's husband of Tangerang Selatan and held a regional government project for Tigaraksa-Rangkas Bitung Toll funded by APBD. The Mayor of Tangerang Selatan itself is the owner of PT. Putra Perdana Jaya that is a contractor for government toll project of Citeurep-Tanjung Lesung-Sumur. Another example is a famous sugar factory in Yogyakarta that caused air pollutions since years due to its liquid waste, but no sufficient measures toward the factory because as what commonly known that the ruler of Yogyakarta is the owner. Hence, due to incompatibility of relationship between enterprises and the local ruler in Indonesia to successfulness of EI's implementation, it should be rethought that systemic factor should be evaluated. The high cost to run for regional ruler is a main cause why local elections are dominated by

business actor, or for winning the election a candidate at least has to be supported by business actor which might mean that business actors invested their interests in a regional ruler candidate. It will also influence local governments in making a decision including when setting environmental standard if the heads of regional government have certain interest related to enterprises.

3.4. Challenges

One of the most challenging part for Indonesia in EI's implementation is that Indonesia has to reverse on the use of fossil fuel energy. Since years the country has a perspective that fossil fuel is a primary need for society hence the use of it should be support by the government by allocating subsidy in fossil fuel consumption. This policy has been strongly criticized entirely world by considering that use of fossil fuel should be taxed due to its air pollution impacts instead giving subsidy.

In environmental tax implementation, it should be considered that it is far from easy to collect the tax revenue in a reliable way. Efforts to collect sales and income taxes in most of the countries in which these ideas are proposed already encounter the difficulty of monitoring sales or wages, and corruption. Taxes on pollution raise the same collection concerns, and additional ones also, as they are highly dependent on good environmental monitoring [15]. As what've been discussed above regarding government staffs' capacities and corruption index as also if we reflect what have been happen in other developing-countries that previously implemented EI's, it is easily predicted that EI's implementation in Indonesia will not be very different.

Political challenge becoming a mainstream challenge of EI's implementation in most of developed-countries. As what written by Michael Faure through his paper that common challenges are consisted: First, the actual price to be paid for abatement will depend on the bargaining power of the actors. If a 'right to pollute' is assigned, most benefits could be reaped by polluters if they are tough bargainers. Second, the efficient outcome can be undermined by strategic behavior. Third, the victims must have resources to pay for abatement. Fourth, the Coase theorem only considers the efficiency aspects of pollution, not its distributional effects [16]. As the developed-countries are remain facing some serious challenges and many references that examine on evaluations of EI's implementation in developing countries, it can argue that to many fields that must be improved and evaluated for Indonesia's recent circumstances.

4. CONCLUSION

There are three types of instrument for protecting environment: command-and-control (CAC), economic instruments (EI's) or market-based instruments (MBI's), and voluntary agreement. Those instruments have each strengths and weaknesses, hence even though many literatures said that use of EI's lead to efficient and less cost rather than CAC but the facts show that EI's

implementation has a common challenge regarding political lobbying in legislative level.

While in in Indonesia, EI's implementation could be predicted will only end-up such other developing-countries due to several constraints. The three main constraints consisted insufficient of government officer capacities, corruption, and lobbying from interest groups are serious issues that are faced by the government and need seriously and continuously evaluation and improvement.

REFERENCES

- [1] C.T. Whitman, "Environmental Protection and Economic Prosperity: Not A Zero-Sum Game", [Online]. Available:<https://assets.aspeninstitute.org/content/uploads/files/content/docs/ee/ENVIRONMENTALPROTECTION.PDF>. [Accessed: Sept. 13, 2019].
- [2] INTOSAI WGEA, "Market-Based Instruments for Environmental Protection and Management," Report from the 14th EUROSAI WGEA Annual Meeting EUROSAI WGEA Secretariat, 2016. [Online]. Available:https://www.eurosaiwgea.org/meetings/Documents/14%20AM/14AM_report_0602.pdf [Accessed: Aug. 9, 2019].
- [3] Robert W. Hahn and Robert N. Stavins, "Economic Incentives For Environmental Protection: Integrating Theory and Practice", *Economics of The Environment*, vol. 82, no. 2, May, 1992. [Online serial]. Available: <https://www.researchgate.net/publication/4725098> [Accessed: Sept. 11, 2019].
- [4] Greenhalgh & Faeth: 2001, in Suzie Greenhalgh; Susan Walker; Bill Lee; Theo Stephens; and Robyn Jean Sinclair, *Environmental Markets for New Zealand: The Barriers and Opportunities*, Landcare Research Science Series No. 40, Manaaki Whenua Press, 2010. [E-book]. Available: <http://docs.niwa.co.nz/library/public/LRss40.pdf> [Accessed: Sept. 3, 2019].
- [5] Galia Khusnutdinova and Brian Dollery, *An Evaluation Of The Application Of Economic Environmental Policy Instruments In Uzbekistan*. University of New England, [Online document], 2005. Available: www.une.edu.au/febl/EconStud/wps.htm. [Accessed: Sept.18, 2019].
- [6] David O'connor, "Applying Economic Instruments in Developing Countries: From Theory to Implementation", *Economy and Environmental Program for Southeast Asia*, OECD Development Center, 1996. [Online]. Available: <https://idl-bnc-idrc.dspacedirect.org/bitstream/handle/10625/28989/118126.pdf?sequence=5> [Accessed: Sept. 2, 2019].

- [7] Firuz Demir Yasamis, Economic Instruments of Environmental Management, “Proceedings of the International Academy of Ecology and Environmental Sciences”, Proceedings of the International Academy of Ecology and Environmental Sciences, August, 201. [Online serial]. Available: [http://www.iaees.org/publications/journals/piaees/articles/2011-1\(2\)/Economic-instruments-environmental-management.pdf](http://www.iaees.org/publications/journals/piaees/articles/2011-1(2)/Economic-instruments-environmental-management.pdf). [Accessed: Oct. 2, 2019].
- [8] United Nation Environmental Program, “The Use of Economic Instruments in Environmental Policy: Opportunities & Challenges”, United Nation Publication, 2004. [Online]. Available: <https://www.cbd.int/financial/doc/several-several-une.pdf>. [Accessed: Aug. 30, 2019].
- [9] Rachmad Erland Danny Darmawan, “The Practices of Decentralization in Indonesia and Its Implication on Local Competitiveness”, Public Administration-Public Governance Study School of Management and Government University of Twente Enschede, 2008. [Online]. Available: https://essay.utwente.nl/59282/1/scriptie_R_Darmawan.pdf. [Accessed: Oct. 2, 2019].
- [10] Maria Angeles Garcia-Valiñas, “Decentralization and Environmental Policies: An Application To Water Resources”, 2005. [Online]. Available: <https://www.researchgate.net/publication/41537625>. [Accessed: July. 14, 2019].
- [11] Directorate of Legal Enforcement, Three Years Achievement Report of 2015-2017. Ministry of Environment and Forestry of Republic of Indonesia, 2018.
- [12] Ortrun Merkle, “Indonesia Overview Corruption and Anti-Corruption”, Transparency International Anti-Corruption Heldesk Answer, October 2018. [Online]. Available: https://knowledgehub.transparency.org/assets/uploads/helptdesk/Country-profile-Indonesia-2018_PR.pdf. [Accessed: Sept. 7, 2019].
- [13] Azzouz Zouaoui, et.al, “World Corruption Perception Index Analysis”, Research Journal of Finance and Accounting, Vol.8 No.24, p. 87, 2017. [Online serial]. Available: <https://pdfs.semanticscholar.org/f09c/d67ecf0ad1c33dc8fe0b016bed715ae87341.pdf>. [Accessed: Oct. 2, 2019].
- [14] Michael Faure, Morag Goodwin, Franziska Weber, “Bucking The Kuznets Curve: Designing Effective Environmental Regulation in Developing Countries”, Virginia Journal of International Law, vol. 51, no. 1, 2010. [Online serial]. Available: https://pure.uvt.nl/ws/portalfiles/portal/1295481/Goodwin_Bucking_the_Kuznets_Curve_110114_publishers_embargo1y.pdf. [Accessed: Aug. 17, 2019].
- [15] Ruth Greenspan Bell, “Choosing Environmental Policy Instruments in the Real World”, Organisation for Economic Co-operation and Development, 2003. [Online]. Available: <http://www.oecd.org/environment/cc/2957706.pdf>. [Accessed: Sept. 16, 2019].
- [16] Michael Faure and Stefan E. Weishaar, The Role of Environmental Taxation: Economics and The Law, Handbook of Research on Environmental Taxation, Edward Elgar, 2012. [E-book]. Available: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2370360.