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Disaster Response in Indonesia: Initiating Income Tax Policy Pro Disaster Mitigation

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Abstract

As a country with high potential for natural disaster, Indonesia can suffer from economic disruptions arising from significant decline in gross domestic income (GDP) due to financing losses caused by natural disaster. To reduce the risk of loss caused by natural disasters, the government has issued disaster mitigation policies in the form of structural and non-structural policies. In 2018, the government initiated a disaster mitigation policy in the form of natural disaster insurance prioritized to protect state assets. It does not exclude the possibility that this insurance shall be given to civil society, yet an issue arises regarding the source of funding for the insurance. Tax instruments are expected to be a policy innovation to overcome the issue of financing insurance. The purpose of this study is to explore the potential and role of fiscal policy through tax instruments in the context of disaster management in Indonesia. This study applied a qualitative approach and collected data through field studies and in-depth interviews. The findings of this study indicate that the natural disaster insurance policy may adopt the concept of tax allowance on donation and zakat as stipulated in Law No. 36 of 2008 on Income Tax. This incentive provides a tax facility in the form of tax allowance on income for calculating Income Tax. The policy is expected to attract the community to participate in natural disaster insurance amid the general lack of participation in insurance in Indonesia. On the other hand, the government obtains a source of revenue to finance disaster mitigation without disrupting the economy of the country.

Keywords

Natural Disaster Insurance; Disaster Mitigation; Tax Allowance; Income Tax; Policy Innovation

INTRODUCTION

Indonesia is flanked by two oceans and crossed by three active tectonic plates (ring of fire), rendering Indonesia prone to disaster. The meeting point of the three active plates leads to the high frequency of earthquake occurrence and the formation of an active volcanic line along the islands of Sumatra, Java, Bali and Nusa Tenggara. Currently, Indonesia has 240 volcanoes, 75% of which are active volcanoes with a seismic zone level of approximately 81% (Ridayanti et al., 2013). Thus, Indonesia is an area with high intensity of natural

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disasters.

The data from the National Disaster Management Agency (BNPB) reveal that the total number of natural disasters in Indonesia from 2018 to 2019 reaches 4,816, each causing great damage. Based on Table 1, the total number of deaths and injuries is 27,654, while the total number of damaged houses and public infrastructure is 792,152 and 531 units respectively. According to the European Commission for Latin America and Caribbean (ECLAC), natural disasters have the secondary effect involving the overall economic performance and Gross Domestic Product (GDP) (Artiani, 2015). In Indonesia, natural disasters such as earthquakes may potentially reduce GDP by 3% or USD 30 billion (Badan Kebijakan Fiskal, 2018). It is understandable since the entire damage caused by natural disasters is borne entirely by the central government and local governments using the cost sharing instrument between the State Budget (APBN) and the Regional Budget (APBD). Furthermore, based on the review of the Fiscal Policy Agency, there is financing gap in dealing with natural disaster risks. This gap emerges due to the inability of the government to manage risk transfer from APBN and/or APBD (Badan Kebijakan Fiskal, 2018).

To reduce the risk level and financing gap, disaster risk management is implemented. Disaster Risk Management is a concept to manage disaster risk by combining the perspectives of management, prevention, mitigation and preparedness (Baas et al., 2008). According to the Federal Ministry for Economic Cooperation and Development (2015), there are 4 stages of natural disaster risk management, namely risk analysis, prevention and mitigation, preparedness, and risk transfer. Risk transfer is known as a financial function or solution in natural disaster risk management. One of the recommended schemes of risk transfer is an insurance scheme adapted to the conditions of the relevant regions. This scheme is believed to be able to provide immediate financial assistance in dealing with natural disasters in countries with a high risk of natural disasters (Laframboise & Loko, 2012).

The concept of natural disaster insurance scheme has been considered in Indonesia since the commencement of International Monetary Fund (IMF) 2018 Meeting. The natural disaster insurance policy is currently at the stage of policy formulation directing to insure state assets. However, this policy proposal does not exclude the possibility that the government shall provide an insurance program for the community since BNPB had submitted a request for disaster insurance to the government through the Ministry of Finance in 2013. However, there are several obstacles in this policy preventing the government from further reviewing this proposal. The obstacles to resolve are the source of funds and the low penetration rate of insurance in Indonesia. Therefore, it is necessary to have a policy innovation able to be an alternative solution to overcome the lack of sources for financing the insurance, one of which is by using a tax instrument.

Table 1. Data of Natural Disasters in Indonesia in 2018-2019

Type of Disaster	Number of Occurrence	Death and Injury (People)	House (Unit)	Damage to Public Facilities
Flood	1,234	1,718	397,490	118
Landslide	982	460	3,958	17
Flood and Landslide	5	3	89	0
Abrasion	58	14	26,915	1
Tornado	1,707	375	27,883	27
Drought	130	0	0	0
Wildfire	588	9	2	0
Earthquake	47	2,744	233,035	151
Tsunami	2	14,512	2,752	0
Earthquake and Tsunami	1	7,763	100,028	217
Volcanic Eruption	62	56	0	0
Total	**4,816**	**27,654**	**792,152**	**531**

Source: The National Disaster Management Agency (BNPB), 2019. Reprocessed by authors.

Tax has a significantly strategic function since in addition to be the source of state revenue. Tax is also frequently utilized as the instrument of government policy. As a policy instrument, tax collection is carried out to achieve particular objectives set by the government (Rosdiana & Irianto, 2014). In regard to the concept of disaster insurance policy, providing incentives in the form of tax allowance on Income Tax is expected to encourage the community to participate in this insurance program. This incentive had been implemented in Japan in earthquake insurance (Watanabe, 2015) and it played a major role in assisting the government of Japan with restructuring the post natural disaster areas in 2011. In contrast to Japan, Indonesia currently contemplates the mechanism of financing disaster management without disturbing the financial stability. However, studies of the utilization of tax instruments for financing disaster management and disaster insurance in Indonesia are rare. Therefore, this study was conducted to analyze the potential and the role of fiscal policy through tax instruments in the context of financing disaster management in Indonesia.

THEORETICAL FRAMEWORK

Watanabe (2015) explains that Japan applies natural disaster insurance in a special form, specifically for earthquakes. The government of Japan encourages community participation in insurance by providing tax allowances for the community paying earthquake insurance premium. The implementation of disaster insurance policy in Japan emphasizes the equality of treatment for the payment of natural disaster insurance premium and that of social insurance premium in general, allowing the government of Japan to provide tax allowance. This insurance scheme was established in 1966 through the issuance of Act No. 73, May 18, 1966 concerning Earthquake Insurance (Simanjuntak, 2016). The government of Japan continues to develop the insurance system; thus, this policy is the provision of tax allowance on Income Taxes for Individual submitting the evidence of insurance premium payment, accompanied by additional requirement in the form of the evidence that their residence meets the earthquake-resistant building construction standards. The tax allowance provided is a maximum of 50,000 yen. Despite decreasing the government tax revenues, the provision of this tax allowance also provides several benefits. The principle emphasized in this policy innovation is cost-sharing in post-disaster financing. The cost of post-natural disaster is not fully incurred by the government, but also by the insurance company as the policyholder.

Similar to Japan, Indonesia is a disaster-prone country. Therefore, it is important to consider the urgency of disaster risk management and natural disaster mitigation financing. Basically, Disaster Risk Management is a concept to manage disaster risk by combining the perspectives of management, prevention, mitigation and preparedness (Baas et al., 2008). It is also interpreted as a process of planning, implementing, evaluating, and adapting strategies, procedures, and measurements related to analysis, reduction and transfer of disaster risk aiming to reduce risk (Federal Ministry for Economic Cooperation and Development, 2015). According to BMZ, there are 4 stages of Disaster Risk Management, namely risk analysis, prevention and mitigation, preparedness, and risk transfer. One of the financial schemes to mitigate disaster risk is by transferring risk through natural disaster insurance schemes.

The Fiscal Policy Agency (2018) carries out a study of disaster risk insurance and financing strategies and discovers financing gap in dealing with natural disaster risks. This gap emerges due to the inability of the government to manage risk transfer from APBN and/or APBD. This gap is then minimized by increasing the risk transfer financing or pooling fund to reduce the level of economic and physical losses as the consequences of natural disasters.

In reviewing the idea of utilizing tax instruments in natural disaster insurance policy, the concepts of fiscal policy, tax incentives, consumption tax, income tax, and piggyback tax are utilized to obtain a comprehensive perspective in data analysis. Observed from the economic perspective, public policy needs to pay attention to monetary policy and fiscal policy. According to Horton & El-Ganainy (2009), fiscal policy is a policy in the economic field related to government expenditure and taxes to influence the economy. The government utilizes fiscal policy to encourage and maintain growth as well as reduce poverty. On the other hand, Kopcke, Tootell & Triest (2006) state that fiscal policy has the ability to affect aggregate demand, distribution of wealth, and economic capacity in the production of goods and services.

Fiscal policy is closely related to the economic behavior of the public and private sectors (Ito & Rose, 2007), thus the objectives of fiscal policy are also closely related to the public and private sectors.

Fiscal policy is also closely related to tax policy, leading to the provision of tax incentives. Tax incentives are tax facilities generally defined as a form of facility from the government in terms of taxation. According to Zolt (2015), tax incentives are special provisions allowing tax exemption, credit, tax deduction, or deferment of tax liability. Tax incentives may be provided in the form of tax holiday, current deductible expense for certain types, or reduced import tariffs or duties (Newbery, & Santos, 1999; Gultom et al., 2017). According to Easson & Zolt (2002), the government tends to choose incentives compared to other policy alternatives since tax incentives offer numerous benefits: (1) easily provided rather than the improvement of the inadequate legal system or the immediate development of a communication system in a country, (2) not leading to the need for the government to provide actual funds for the company.

There are at least two types of tax which could be utilized in supporting the natural disaster insurance policy, namely income-based tax and consumption-based tax. Income-based tax is tax imposed on every additional economic value received by the taxpayer in a certain period of time. By applying the ability to pay approach, income-based tax is regarded as a form of tax which representing equality and is also applicable (Rosdiana & Irianto, 2014). Meanwhile a consumption-based tax is a type of tax imposed on consumption regardless it is consumed gradually or immediately. One of the mechanisms applied in this consumption-based tax is piggyback tax.

According to Ebel & Taliercio (2004), piggyback tax system is taxation authority owned by the Sub-National Government by increasing the local tax rate at the central tax. The characteristics of piggyback tax are as follows: (1) having the right to impose an additional tax burden on the central tax in the jurisdiction; (2) the local government does not have discretion in determining the tax base or, in other words, the basis of imposition is equal to the central tax base; and (3) the tax is administered and collected by the higher central government and later distributed to the relevant regional treasury (Direktorat Jenderal Perimbangan Keuangan, 2014).

RESEARCH METHOD

This study applied a qualitative approach, in which most of the data are obtained from in-depth interviews with informants having the knowledge concerning the related issues (Neuman, 2007). In this study, the authors held the key to the success of discovering the meaning of the data rather than generalization. The data used in this study were divided into primary data and secondary data. The technique applied to collect primary data was in-depth interviews. The informants in this study were those having a role in regulating policies, allowing the ideas from the findings of this study to be implemented. The informants included taxation academics, Regional Development Planning Agency of Central Java (Bappeda), Fiscal Policy Agency, BNPB, General Insurance Association of Indonesia (AAUI), Coordinating Ministry for Economic Affairs of Republic of Indonesia (Kemenko), and the Directorate General of Taxes (DGT). Referring to the data from BNPB, Central Java was selected as the locus of this research since this province has suffered the most from natural disasters on Java in the last 5 years. This study also conducted a comparative study with tax allowance policy for earthquake insurance in Japan. In addition, secondary data was obtained by conducting literature studies and references related to the questions of the study.

RESULTS AND DISCUSSION

The Utilization of Tax Instruments in the Concept of Disaster Insurance Policy

Tax incentives are a form of tax facilities. The form of tax incentives varies and adapts to interests. Referring to United Nations Conference on Trade and Development (2000), one form of tax incentives is deduction. Utilizing the concept of deduction, ordinary, necessary and reasonable expenses may be deductible expenses. According to Due (1985) and Browning (1985) tax deduction shall affect investment activities and consumption. Incentives are provided as a tool to motivate an action required to achieve an objective. Tax incentives are one of the instruments encouraging investment, provided in the form of facilities to certain taxpayers, later regulated in more specific tax regulations to prevent them from hindering investment. In terms of initiating the disaster insurance policy, this study leads to two tax policy options, namely tax allowance in the form of deduction of Tax Base on Income Tax and piggyback or surcharge in Rural and Urban Land and Building Taxes (PBB-P2) collection.

The first option is implemented by specifying natural disaster insurance premium as deductible expense. The payment for disaster insurance premium could be treated equally as zakat and donation as stipulated in Article 6 paragraph (1) of Law Number 36 of 2008 on Income Tax (the 2008 Income Tax Law). Related to policy regulation instruments, this policy is a low-cost policy since the concept of deductible expense has previously implemented in the 2008 Income Tax Law. Thus, the government only needs to reaffirm the concept in the derivative regulations.

This tax allowance may be provided through two options, at the level of Individual and Corporation. At the level of Individual, insurance premium payment may be treated as deductible expense equal to zakat, thus reducing Taxable Income and Income Tax imposed on the Individual. This deduction may be utilized by all parties participating in the natural disaster insurance program. At the level of Corporation, insurance premium payment may be treated as deductible expense equal to preventive contribution, thus reducing Corporate Income Tax imposed on the corporation.

As the consequence, the policy ultimately reduces the government revenue from income tax. However, the revenue from natural disaster insurance has an impact in the form of sharing costs. Natural disaster insurance may be utilized to cover claims on premium in accordance with the agreements between individuals/corporations and the government, reducing the utilization of natural disaster management funds. The coverage of these funds may be partial or impartial. In this regard, the natural disaster insurance premium may be a 'subsidy' to the lack of funds in disaster mitigation (in which the rest is managed through APBD or APBN) or even fully finance all disaster mitigation costs. Referring back to its current concept, natural disaster insurance policy shall provide better fiscal stability/certainty of APBD and APBN.

Natural disaster insurance coverage in Indonesia has to consider the scale of natural disasters, whether they are categorized as national disasters or not. Supposing they are not, APBD is allocated to finance the natural disasters. Should the APBD funds are insufficient or the impact of the natural disasters stifles the government, APBN shall be allocated to finance and/or cover the lack of the funds. It indicates that natural disasters shall obviously disrupt the fiscal stability of APBD and APBN. Meanwhile, APBD and APBN is not available in the beginning of the year. Even on call funds specifically prepared for natural disasters have a threshold for utilization.

The second option is implemented by utilizing the concept of piggyback or surcharge in the calculation of PBB-P2. Piggyback is a surcharge due to the increase in tax rates imposed by the central government on local governments (Bird, 2010). In adapting this concept, the government may raise the PBB-P2 rate to include the component of natural disaster insurance. The funds obtained from the increase in rate shall be submitted to the central government to be managed as natural disaster insurance. The benefit of this alternative is the high level of public compliance in paying PBB-P2. Local governments can also play a role in determining the premium rates by considering the level of disaster risks in the respective regions. Areas with higher risk of disaster shall have higher premium rates than areas with lower risk of disaster.

In terms of push factor, PBB-P2 is imposed on the ownership of land and/or buildings, thus the payment for insurance premium on property may be imposed on each taxpayer owning land and/or buildings. Income tax is imposed on taxable income of Individual and Corporation exceeding the threshold of non-taxable income, thus not all people are obliged to pay income tax. Considering the nature of PBB-P2, it is highly possible that the payment for insurance premium on property is merely imposed on each Head of Family as the PBB-P2 taxpayer. Thus, the concept of piggyback merely represents one individual as the Head of Family or the owner of land and/or buildings, while the concept of tax allowance represents each Individual/Corporation earning income.

In terms of regulatory administration, implementing disaster insurance with the concept of piggyback in PBB-P2 collection needs to consider the preparation in making changes to the Tax Law, considering that the premium in the element of PBB-P2 is obligatory and has not been regulated in the related Tax Law. It causes larger costs in collecting funds and difficulty in immediate implementation. On the other hand, implementing disaster insurance with the concept of tax allowance on Income Tax does not need to change the substance of the Tax Law, indicating easier administration and lower costs.

Considering that PBB-P2 is a Local Tax, it is necessary to discuss the management issues of this policy, particularly the proper management and national implementation. Decentralization allows regions to have full authority to seek and manage income, hence the full authority to manage this policy. Differences in rate between regions have the potential to trigger jealousy at the community level, yet, considering the level of risk and the potential for natural disasters, this policy can encourage the community to prefer to live in safer areas.

As material for consideration, PBB-P2 is currently the largest income for each region, yet PBB-P2 policy is closely related to the issues of fiscal decentralization and political interests of regional heads. Therefore, the importance of the implementation of this policy is largely determined by the political interests of regional heads. Another consideration is the need for synergic coordination between the central government and local governments for smooth implementation of this policy as well as the need for the readiness of the tax authorities in the local governments to accommodate the common interests between the community and the local governments, such as human resources, administrative capacity and others.

Taking into account all the considerations stated above, the tax incentives using the Income Tax Policy scheme would be suitable to be implemented in Indonesia. Considering Indonesia has previously implemented the concept of deductible expense as stipulated in Article 6 of the 2008 Income Tax Law. The payment for natural disaster insurance premium could be treated equally as zakat and donation. The government would not need to spend much fund on formulating the regulation, instead the government only needs to reaffirm the concept in the derivative regulations. Meanwhile, if the government proceeds with the PBB-P2 scheme, then it would take quite a large amount of fund to formulate the legal umbrella. Therefore, from the perspective of funding efficiency and concept alignment, the Income Tax policy scheme is easier to be implemented.

Institutional Issues in the Concept of Disaster Insurance Policy

In implementing the disaster insurance policy, the government also needs to pay attention to another factor, namely institutional issues in managing disaster insurance funds. It is necessary to involve relevant stakeholders to ensure the proper implementation of this policy, either an insurance company (alternative 1) or an independent government institution established to manage disaster insurance funds (alternative 2).

Observing the first alternative, should the government inclines to cooperate with an insurance institution, the readiness of the insurance institution as policyholders is the main consideration. In the case of the scheme implemented is cost-sharing between the government and the insurance institution, further studies are required to review the division of roles and level of participation of the insurance institution in the management of natural disaster insurance funds. If a private company is not considered a proper choice to bear natural disaster risks, the government can also consider several other policies, such as establishing a state-owned public service agency whose task is to manage funds collected from the payment of natural disaster insurance premium. The first consideration is the unpreparedness of the private insurance company to bear all disaster risks. The second consideration is the expected role of the government to be able to manage funds based on social trust from the community in general.

The government can also cooperate with a private or specialized insurance institution established by the government. The management of natural disaster insurance funds by a private insurance institution shall be easier and more trusted since insurance institutions in general have applied professional principles in carrying out the insurance business. Alternative policies may be implemented should there is a private insurance institution willing to manage natural disaster insurance funds with large amount and high risk. However, private insurance institutions in general tend to refuse to accept insurance related to natural disasters and other high risks since they hold the business principle of avoiding high potential losses due to large insurance claims.

In addition, as stated by Abidin from the Fiscal Policy Agency, it should be considered whether this insurance institution is a foreign or national insurance institution. Cooperating with a foreign insurance institution indicates foreign exchange flowing out, risking deficit balance of payments due to exchange rate pressures (In-depth interview, Zainul Abidin, Fiscal Policy Agency, 2019).

Observing the second alternative, the government can establish a specific insurance institution managed directly by the government in the form of a Public Service Agency (BLU) by considering public trust in the government as the highest authority. In this regard, the issue of administrative and organizational capacity as well as professionalism in the management of insurance premium is highly important, considering that several concepts of insurance managed by the government, such as the Health Care and Social Security Agency funds, suffer losses of up to IDR 16.5 trillion (Rachman, 2018). Since natural disaster insurance funds may be needed at any time, the financial management shall be carried out immediately and optimally.

Observing Japan as the benchmark for this study, tax management for disaster mitigation is carried out to optimize community participation in the Natural Disaster Insurance program. The insurance fund management system applied in Japan was to establish a reinsurance company in 1966 called Japan Earthquake Reinsurance Co., Ltd. (JER), consisting of approximately 20 general insurance companies to act as the organizing entities or managers of earthquake insurance funds. The government of Japan also took the risk by acting as a reinsurance party. The division of responsibility for the payment for claims was regulated in the form of an agreement known as non-proportional or excess of loss reinsurance. In order to encourage community participation, the government of Japan issued a policy innovation by providing a tax allowance on income tax in 2007.

The Urgency of Utilizing Tax Instruments in the Concept of Disaster Insurance Policy

The government needs to pay close attention to agenda setting in formulating the natural disaster insurance policy, including the utilization of tax instruments in it, one of which is related to community needs for natural disaster insurance products. Several sources state that the government needs to assess the needs and institutions of natural disaster insurance management in Indonesia. Geographically, Indonesia is a disaster-prone country, hence the importance to implement disaster insurance. In terms of an urgent need for natural disaster insurance in the community, the tax allowance policy on natural disaster insurance premium is implemented to stimulate community participation in insurance sector. The availability of human resources, insurance providers, institutions and coverage rates for various types of natural disasters is necessary to be considered in the formulation of this policy.

Another issue to consider is the low level of public literacy for general insurance. Financial Services Authority (OJK) states that the literacy index of general insurance of the community of Indonesia remains 15.76% per 2017, while the rate of insurance utility reaches 11.81% in 2013, with an insignificant increase to 12.08% in 2017 (Sahara, 2018). To be able to implement this policy innovation, it is essential to increase public awareness regarding the importance of the role of disaster insurance through the process of education and socialization. High public awareness allows the government to play its role by implementing supporting policies, one of which is the provision of tax incentives.

In addition to the needs of the community for an insurance, there is also a consideration of macroeconomic conditions. The emergence of a policy shall certainly have an influence on economic conditions, both micro and macro. Therefore, in deciding a policy, it is necessary to consider the current macro and micro economic conditions and outlook for the next few years. First, to ensure satisfactory implementation and progress, this policy needs to consider the timing and threshold. For example, the policy is issued when the income per capita of the country has reached a certain point. Observed from a macro perspective, the threshold to be considered, among others, are the relationship between education and insurance and the relationship between regional development and insurance. Second, observing the current macroeconomic conditions reveals low fiscal tax ratio of Indonesia compared to Japan. In 2018, the tax contribution to state revenues reaches more than 80% with annual increase. However, tax effort of Indonesia reaches merely 0.47. Based on the data from the Directorate General of Taxes (DGT), the tax ratio of Indonesia from 2011 to 2013 is even lower than the lower-income countries. Referring to the low tax ratio, it is necessary to consider the appropriateness of tax allowance policy on income tax on natural disaster insurance. Thus, piggyback tax is an alternative solution.

Low penetration of general insurance in the community is a challenge to formulate this policy. Prior to the implementation of this policy, the government needs to provide the facilities of general insurance and natural disaster insurance literacy for the community. It is important to learn from the failure of previous insurance policies, for example agricultural insurance. It is evident that the lack of understanding of the literacy and the urgency of the insurance hindered the sustainability of the insurance, causing the policy intended to be the solution to the problems of the farmers were not utilized by the said farmers.

The natural disaster insurance policy needs to pay attention to the timing, specifically when the community is ready to obtain the supply of natural disaster insurance (In-depth interview, Zainul Abidin, Fiscal Policy Agency, 2019). Thus, the policy can be an innovative policy capable of addressing the problems of financing disaster in Indonesia. As a country prone to natural disasters such as earthquakes and tsunamis, it is essential for Indonesia to have a qualified concept of disaster mitigation to avoid burdening state finance, considering that there are numerous urgent state affairs such as poverty, unemployment, and the development of public services to encourage the progress of the country. Therefore, it is essential for Indonesia to have more prepared and organized disaster financing rather than solely relying on the existing on call funds. It is important for natural disaster mitigation and financing to have a strong synergy to provide financing certainty for people affected by natural disasters and investment certainty in Indonesia. Since investments in Indonesia are currently provided with tax incentives and facilities, it is also necessary for the government to provide foreign investment certainty and security related to the potential of natural disasters through a qualified disaster mitigation, such as natural disaster insurance.

CONCLUSION

Policies supporting natural disaster insurance financing are non-existent in Indonesia. In comparison, Japan has implemented a tax allowance to finance earthquake insurance premiums since 2007. This system has the potential to be adopted in Indonesia by adapting it to the concept of deductible expenses stated in Article 6 of the 2008 Income Tax Law. This system is possible to be applied in Indonesia since the issue of financing natural disasters has been previously regulated in the Income Tax Law. The applicable law utilizes a different terminology, namely national contribution to natural disasters. In addition, the nature of financing natural disaster insurance premium is nearly similar to that of zakat and donation, indirectly emphasizing the possibility of this system to be applied in Indonesia. The differences in the level of natural disaster risks in several regions in Indonesia leads to the emergence of another financing option, namely PBB-P2. PBB-P2 as a property tax has the potential to be utilized as an alternative option for financing natural disaster insurance premium. However, since PBB-P2 is a Local Tax, the readiness of the Local Tax authority is a challenge to face. Furthermore, it is necessary to make changes in the Law of Local Tax and Charges to include the insurance premium as the obligatory element in PBB-P2. It certainly requires a significant amount of time and money. Therefore, the study concludes that utilizing Income Tax Law by giving tax deduction is the most feasible in supporting the natural disaster insurance policy. Taking into account that this is a low-cost policy and the similar concept has been implemented in Indonesia prior.

Another consideration in the formulation of tax allowance policy is the institutional issues in managing disaster insurance funds. There are two alternatives to be selected, one of which is to establish a state-owned public service agency whose task is to manage natural disaster insurance funds, considering the social trust of the community in the authority of the government and the unpreparedness of private insurance institutions to fully bear natural disaster risks. Another alternative policy is to collaborate with private insurance institutions in managing natural disaster risks. This collaboration may occur should there is a private insurance institution willing to manage natural disaster insurance funds with high risk. To be able to further analyze this policy proposal, further studies are required to examine the aspects of institutional settings, governance, tax regulations related to the provision of tax allowance and the ideal division between the government and private insurance companies in managing natural disaster insurance funds and taking risks.

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