Proposed Use of Land and Building Tax as a Fiscal Policy Instrument to Support Flood Disaster Management Financing in DKI Jakarta

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Abstract. This article discusses a proposal applying an earmarking tax scheme to PBB-P2 in DKI Jakarta Province to support financing and flood disaster management, based on the flood disaster that always occurs every year and has many losses. In addition, the current pattern of financing comes from the APBD or local general fund. This scheme will trigger the potential for discontinuity of budget allocations for flood disaster management. This study aims to identify and compare the practice of financing and handling disasters in other countries. Then it aims to see the advantages and disadvantages of the proposed proposal and explore the policy recommendations that can be given if this proposal is later implemented. By using a qualitative approach, this research is done through in-depth interviews and literature study. The study results found that, there are two financing schemes for flood disaster management, namely (1) national budget and (2) other government funds. Another finding shows that the proposed application of the earmarking tax can legally be carried out in DKI Jakarta. Although, there are advantages and disadvantages, and there are several options for the DKI Jakarta Provincial Government that can be considered if this proposal is later implemented.

1 Introduction

Disasters of various scales will significantly impact society, both social and economic losses [1]. The Government needs to prepare various strategies, divided into several stages and preparation stages, during and after disasters occur. These various strategies are expected to minimize the impact and value of losses on the Government and society.

The government’s well-planned disaster management is in line with several Sustainable Development Goals (SDGs) agendas. The first goal is good health and well-being. As receiving a mandate from the community, the government needs to ensure public health by building a clean environment. The second goal is sustainable cities and communities. As a state/regional manager, the Government must ensure the sustainability of urban development and people's lives. One of the goals of good urban planning is to protect the community from various disasters and their damaging impact, including floods. Third, climate action. The government must be at the forefront to prepare the community for disasters caused by climate change.

Strategies that can be carried out before a disaster occurs include preparing financing and proactive management to reduce the negative impact of disasters [2]. Funding made in the pre-disaster period can increase resilience or resilience to the impact of disasters. The community is better prepared to face disasters and can immediately make a post-disaster recovery [3]. Within the scope of the disaster,
resilience is defined as the measure of the capacity of the system to absorb and recover from the occurrence of a hazardous event [4]. Cutter et al. (2010) [5] define resilience as the ability to prepare, plan, absorb, and recover from disasters that may occur.

Regarding flood disaster resilience, Keating et al. (2017) [6] mention three factors considered by disaster management to determine the level of direct damage/loss: hazard, vulnerability, and exposure. Indirect losses due to the level of damage are influenced by the ability to develop strategies in responding to disasters. In addition, the capability of local governments in preparing disaster management also influences changes in community land use, infrastructure, and assets in flood-prone areas, thereby increasing vulnerability and exposure to disasters.

One area that often experiences floods is DKI Jakarta Province. The DKI Jakarta Provincial Government does not have a particular budgeting scheme to deal with flood disasters. All expenditure budgeting is carried out using general funds, which are used to manage all expenditures, including flood disaster management. This budgeting pattern raises financing sustainability in flood disaster management due to changes in government spending priorities.

The sustainability of flood funding is a crucial issue that needs to be strengthened by, among others, using the earmarking tax approach. Earmarking Tax or the allocation of certain types of tax revenue either partially or wholly for specific expenditures, including flood disaster management, without being influenced by economic and political conditions, including changes in government or the government's vision and mission [7][8].

According to Michael [8], Earmarking Tax is a practice in implementing budgeting by allocating specifically tax revenue or other income for specific programs. This practice deposits taxes or other income into separate management. This earmarking tax can be said to be the right policy to be carried out to increase public trust, which will lead to an increase in tax compliance by taxpayers to the government [9].

One type of tax that can be an alternative earmarked tax for funding the flood prevention in DKI Jakarta Province is a land and building tax (PBB-P2), as a local tax. Tax On Land and Building itself is a part of the property tax. Property tax is levied on the use, ownership, and transfer of property rights. Youngman (1996) [10] stated that property taxes on tangible assets must be registered with government authorities, such as land, buildings, and vehicles. This property tax on tangible assets is an indirect tax imposed on the assets owned, so this tax objective and burden are imposed on the property owned.

The purposes of this article are (1) to analyze the financing schemes for flood prevention in several countries; and (2) to analyze the earmarking tax scheme in PBB-P2 to support flood disaster financing in DKI Jakarta Province. The difference between this study and previous similar studies is that other studies discuss disaster management programs and suggestions for handling them, also budget allocation based on the general fund scheme. Meanwhile, this research provides recommendations regarding earmarking tax from the property tax as a funding source for the disaster management program.

2 Method
The research approach used in conducting this research is qualitative. This approach is used to help researchers construct social realities and cultural meanings and focuses on processes of interaction and events [11]. Data collection techniques used are field studies through in-depth interviews to collect primary data. Informants in this study are the Regional Disaster Management Agency (BPBD) DKI Jakarta, Regional Financial and Asset Management Agency (BPKAD) DKI Jakarta, Indonesian General Insurance Association (AAUI), and Academics. A literature study was conducted to collect secondary data. Data analysis was carried out using qualitative data analysis techniques. The analysis was carried out by triangulating the qualitative data that had been collected. Then, a comparative analysis is conducted to explain financing schemes in DKI Jakarta and other countries. The informants selected as resource persons are competent parties in flood management in Jakarta, both in terms of programs and funding. Through interviews with competent parties, the authors can find out in-depth the programs and funding of flood disaster management in DKI Jakarta. The literature was obtained from open sources on online media portals published from 2010 to 2020.
3 Results and Discussion

3.1 Disaster Financing in Various Countries

Several factors are used in explaining disaster financing schemes in various countries, namely, the implementation of earmarking, types of disasters, the scale of strategy implementation, and sources of financing.

3.1.1. Mexico. Mexico has an institution called FONDEN (Mexico Natural Disaster Fund), which functions disaster management. The financing scheme carried out by FONDEN covers a national scale. Financing is done by earmarking the national budget through a pooling fund scheme for disaster financing. This program is carried out in collaboration with the National Bank of Mexico. These funds were used after the declaration of a disaster emergency from the Ministry of the Interior of Mexico [12].

3.1.2. Indiana, Michigan, and West Virginia. All three states use the Fireworks Public Safety Fee scheme, which is carried out by adding additional levies (surcharges) to consumers of the fireworks industry. Surcharges are made through a sales tax on the sale of fireworks, which will be allocated for specific expenditures (earmarked Tax). Each state has different earmark goals, such as firefighter training, disaster management training, fire protection, and a war veterans program financing scheme [13][14][15]. The management of earmark funds on the Fireworks Public Safety Fee is carried out separately through a particular institution, which will allocate levy receipts according to the allocation of funds determined by applicable regulations [16].

3.1.3. Laos and Myanmar. Both countries use the Southeast Asia Disaster Risk Insurance Facility (SEADRIF) program scheme. This program consists of several sub-trusts, including a sub-trust for the working group of ASEAN countries and a sub-trust for disaster financing related to floods in countries traversed by the Mekong River (Laos and Myanmar) [17]. The programs in SEADRIF are divided into two types, namely technical assistance and financing solutions. Knowledge exchange, training, consultation, and other disaster management capacity-building programs, are conducted in the technical assistance sub-trust. Indonesia is a member of SEADRIF, so it is included in the sub-trust working group related to disaster financing strategies. In the sub-trust to finance the flood disaster in the Mekong River, its members are the only countries through which the river flows. Disaster financing in this program is more directed at transferring disaster risk through disaster insurance.

3.1.4. Caribbean dan Pacific. The Caribbean Islands use the Caribbean Catastrophe Risk Insurance Facility (CCRIF) scheme, while the Pacific Islands use the Pacific Risk Resilience Program (PRRP) scheme. These two strategies have similarities between the types of disasters and their financing schemes. The issue of climate change is the main discussion of these two strategies. On the financing side, both are carried out by relying on assistance from other countries, which are earmarked for disaster management, insurance premium payments and disaster infrastructure development [18][19][20].

3.2 DKI Jakarta Land and Building Tax

Tax revenues from the PBB-P2 sector have the potential to overcome this problem of financing and disaster management. PBB-P2 revenue in DKI Jakarta Province has always recorded an increase over the last seven years starting from 2013 to 2019 and is the Tax with the highest revenue compared to other types of taxes. The following is a table of PBB-P2 receipts for DKI Jakarta Province.
Table 1. PBB-P2 revenue in DKI Jakarta Province Year 2013-2019 (in Trillion Rupiah).

|          | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|----------|------|------|------|------|------|------|------|
| Total revenue | 3,37 | 5,65 | 6,80 | 7,02 | 7,71 | 8,89 | 9,62 |

This PBB-P2 revenue as shown in Table 1 is a regional tax [21]. The results can be used as a source of financing for various regional expenditure needs in general, which are managed using the general fund concept. The consideration to make PBB-P2 an earmarked tax is the benefit principle in taxes. Taxes collected by the government should have benefits that the community can accept. In PBB-P2 as a local tax, the relationship between taxes paid and benefits received is relatively strong. The community will be able to directly feel the impact of the PBB-P2 payment in the form of a comfortable place to live because it does not experience a flood disaster.

3.3 Research Findings & Recommendation

Three findings in this research also show this study's novelty, including providing a proposed source of financing for flood disaster management by applying earmarked property tax allocated for funding disaster management programs.

The first finding of this study is that disaster financing and management strategies are adjusted to the scope of disasters divided into national and regional scales in various countries. Meanwhile, the funding comes from the national budget and other state funds. In this study, the authors propose an alternative where disaster financing is carried out locally with funding sourced from local taxes (PBB-P2).

The second finding is related to the advantages and disadvantages of funding sourced from PBB-P2 revenues which function as earmarked Taxes. The advantages of this alternative are (1) increased regional capacity in responding to flood disasters and (2) adequate and sustainable funding capability. However, on the other hand, there are drawbacks, namely (1) reduced flexibility of local government budgets; and (2) institutional challenges in managing the allocated funds.

The third finding is related to the legal basis and policy recommendations. Based on the laws and regulations in Indonesia, the proposed stipulation of an earmarking tax for disaster funding sourced from PBB-P2 revenues can be carried out by referring to the 1945 Constitution and the Regional Government Law. Thus, there is an opportunity to apply earmarking tax to PBB P2 to deal with flood disasters. However, it is better if a particular agency or service carries out the budget receipt and management.

4 Conclusion

The study results found two financing schemes for flood disaster management, namely (1) national budget and (2) other state funds. Another finding shows that the proposed application of the earmarking tax can legally be carried out in DKI Jakarta. Although there are advantages and disadvantages, and there are several options for the DKI Jakarta Provincial Government that can be considered if this proposal is later implemented.

Funding for flood prevention in DKI Jakarta Province which currently comes from the APBD with a general fund scheme, has not guaranteed the sustainability of the local budget. As an alternative to solving budget problems, this study initiated the application of earmarking Tax on PBBP2. However, the proposed implementation of the earmarking tax on PBB-P2 in DKI Jakarta Province requires further assessment to determine the need for funds for flood disaster management, including conducting research and innovation in disaster management definitively. The amount of funds is needed to determine the earmarking allocation to support the regional budget's efficiency and effectiveness. Another recommendation is that the earmarking tax on PBB-P2 does not need to be carried out forever, provided that disaster management is carried out very well and disaster risk can be reduced as significantly as possible.
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