Village fund asymmetric information in disaster management: Evidence from village level in Banda Aceh City

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Abstract. The Village Fund in Indonesia is one of the instruments for budgetary decentralization to accelerate development and community empowerment at the village level. Under the regulation of the Minister of Village and Development of Disadvantaged Regions and Transmigration No. 16, the year 2019, one of the priorities for the use of the village funds is for disaster management. In the implementation, however, asymmetric information and misperception towards the regulation allegedly caused the management of village funds not to be connected with disaster risk reduction programs. This study aims to identify priorities for allocating village funds related to disaster management programs. Furthermore, this study will also determine the factors that cause information asymmetry at each level of policymakers. This research was conducted in 7 villages located in three sub-districts, which were severely affected by the 2004 tsunami in Banda Aceh City. The results of this study show the asymmetry of perceptions exists among the policymakers from the city to the village levels. This asymmetry has led to disaster management programs not being a priority in the use of village funds. The absence of regulation in the city levels hinders village leaders to use village funds for disaster management.

1. Introduction
The Village Fund is an allocated fund derived from the National Budget, which is transferred to villages through City's Budget and is intended to implement village administration, development, and community empowerment [1]. Village Fund has been established in Indonesia since 2016 and expected as a form of budget decentralization provided directly to villages to improve the welfare of the village community. This program has drawn criticism due to mismatched management [2,3] and excessive spending on physical infrastructure [4], while these problems had already been predicted by several works of literature [5–7].

The purpose of this study is to analyze the factors causing asymmetric information related to the prioritization of Village Fund spending in several disaster-prone villages in Banda Aceh City. Every year, the Ministry of Villages issues regulations related to the priority spending of the Village Fund. Since 2018, the regulation clearly mentioned disaster management as one of the priorities of the Village Fund. This regulation should be the legal basis for village officials to allocate and spend Village Funds for disaster risk reduction (DRR), mitigation, emergency response as well as recovery projects, regardless of BTT allocated in the APBDesa. Supposedly, villages that are geographically vulnerable to disasters will be willing to allocate sufficient risk financing and prioritize DRR activities in the Village Funds budgets. However, it is suspected that there are gaps and asymmetry of information regarding the prioritization policies of the Village Fund at various levels of government, with the village level as the main focus.

Asymmetric information is a concept developed from the researches on the economics and information relation. Asymmetric information occurs when one of two dealing parties, own more information than the other [8]. [9], the Nobel Prize winner in economics in 2001, is an important economist who used psychological and sociological aspects in studying asymmetric information on market for second hand cars, called lemons. Despite asymmetric information is a concept in economics, this general idea happens in all fields of life, including exchange of information. The prioritization of disaster mitigation allocation in the Village Fund also involves this problem. The upper level
bureaucracies (e.g. city or provincial level) possess more information and have a crucial function in circulation of information which is mostly top-down approach. The decision makers in the village level learn budgeting mostly from them. They make their social, political, economic decisions regarding the Village Fund with this information. In that respect, there is horizontally asymmetric information among the community, and vertically asymmetric information between village and city’s level.

Aceh became one of the central government priority provinces in terms of the allocation of Village Funds for poverty alleviation and the provision of basic services since the poverty rate of this region is high among other provinces. In 2020, the government is allocating IDR 5.05 Trillion of Village Fund to Aceh (figure 1), the largest allocation for Aceh since the first establishment of the fund. During 2017 to 2019, Aceh received IDR 4.8 T -4.9T.

![Figure 1: Allocation of Village Fund in Aceh (2017-2020)](image)

The city of Banda Aceh was the most severely affected area in the 2004 tsunami. The tsunami swept seawater and debris into residential areas up to 5 kilometers inland and devastated houses, roads, bridges, schools, hospitals, business facilities, and telecommunication infrastructures[10] located in most of gampongs (refer to villages in Acehnese). Up to 2009, the rehabilitation and reconstruction process was coordinated by the Aceh Rehabilitation and Reconstruction Agency (BRR), funded by the Central government, Multi-Donor Funds (MDFs), and NGOs. During the BRR period, 140,304 permanent housings were erected, 3,698 kilometers of roads, 1,115 health facilities, 1,759 schools, 363 bridges, and 23 ports were constructed[11]. After BRR, several recovery programs continued under the responsibility of the local governments and several NGOs.

Since it has been passed, the law [9] regarding disaster management in Indonesia, the mitigation process, emergency response, as well as post-disaster recovery is carried out and coordinated by the Indonesian National Board for Disaster Management (BNPB). On the one hand, the disaster management budget is provided by the central government through the ministry of finance in the form of On-Call budgets and Ministries' regular budgets [12]. On the other hand, disaster risk financing at the provincial levels is divided into two allocations, namely regular budgets in Local Disaster Management Agency (BPBD) and other agencies, and Unexpected Spending (BTT). Unfortunately, on average, the BTT allocation is only less than 1 percent of the total Local Budget (APBD) in most provinces and cities in Indonesia. Furthermore, there is no clear formulation for risk financing in the village levels. There is a kind of BTT allocation in the Village Budget (APBDesa). However, it is not intended for disaster risk financing exclusively. Yet, the portion is insignificant compared to the size of the currents total Village Budget.

2. Methods
The central focus of this study is on the gampong communities in the post-2004 tsunami affected regions of Banda Aceh city. The city consists of 9 sub-districts and 90 gampongs. This research was conducted in seven gampongs (Alue Naga, Deah Raya, Gampong Pande, Gampong Jawa, Keudah, Peulanggahan, Lamjame) in three tsunami-affected districts (Syiah Kuala, Kuta Raja, and Jaya Baru). The data were
collected from the 2017-2018 village budgets and questionnaires filled by the head of each village or the treasury of the villages. A serial semi-structured interview was carried out to uncover the budgeting process, allocation, and spendings of the DRR program in the Village Fund and the motivation behind decisions taken. Initially, this study was designed using 17 villages spread across five sub-districts affected by the 2004 tsunami. The selection of sample locations is based on consideration of the severity of the impact of the disaster and the distance from the seashore. The rationale is that these villages would really depend on the Village Funds to continue the recovery programs.

However, there were several obstacles during data collection and interview processes. First, the Village Fund becomes a sensitive issue at the moment of this study. Reports on misconduct behavior related to Village Fund spendings appeared in the media have made the village officials responded selectively and defensively during the interview process. Second, there was a diverse understanding between the head of the Village as the person who has the authority to spend the Village Fund and the treasurer of the Village as the financial administrator of the Village Fund. This difference in knowledge leads to different interpretations among program priorities, budget realization, and financial accountability. Third, not all villages have human resources that are able and have sufficient knowledge to do good accounting. Therefore, only a few villages are willing to share their financial statements.

The interviews were carried out in three stages. At each stage, the focus of the questions is related to asymmetric information among governments, from city to village levels. In the first stage, interviews were conducted at the Village and Community Empowerment Agency (DPMG). This agency was authorized to distribute Village Fund from the Local Budget (APBK) to all ninety villages in Banda Aceh City. The interview aims to identify the structure and mechanism of village budget, allocation of Village Fund, mechanism of distribution, spending, and reporting. During the second stage, an interview was conducted at the Local Disaster Management Agency (BPBD) of Banda Aceh City to clarify the disaster risk financing mechanisms and budgetary system between the city and village levels. Furthermore, this second interview phase also aims to identify the potential role of the Village Fund in mitigation, preparedness, emergency response, and recovery. The last stage is to interview the village officials in order to identify the factors affecting the asymmetry of information on the prioritization of Village Fund allocation and spending for disaster risk reduction.

This study applied the essence of Akerlof’s lemon markets second hand car asymmetric information to the Village Fund issue. Akerlof describes that the car owner has more information on his car than the potential buyer[13]. Consequently, the buyer bear the risk of buying the bad qualified car from high price. This wrong decision is called adverse selection[8]. Asymmetric information also creates another problem which is called moral hazard. For example, [14] explains this problem in finance market when the borrower is hiding actions from the lender and so risking the repayment. [15] explains this dispersion of information in social life’s can be examined from the aspect of asymmetric information concepts. As for this study, it is unclear whether the village community is misinformed or disinformed regarding the prioritization of Village Fund on DRR. However, there exists indications of moral hazard and adverse selection in the Village Fund management due to asymmetric information.

3. Result and Discussion

3.1. Anatomy of Village Budget System

It is first necessary to understand the anatomy of the Village Fund element in the Village Budget (APBDes) structure (figure 2) to understand the role of Village Funds. Basically, a village has three sources of revenue, namely Village Original Income (PAD), Transfer Budget, and Other Income. In the Transfer Budget, there are three sources of incomes, namely the Transfer of Village Fund from the State Budget (APBN), Grants/Assistances from Provinces, and City/Regency’s Transfer Funds, including Villages Fund Allocation (ADD), Revenue Sharing Funds (DBH) from tax and etc. The composition of the Village Fund in the total Village Budget (APBDes) is varied. In Banda Aceh City, the structure of the APBDes is 50-55% of the Village Fund (APBN) and 44-50% of Local Fund (APBD/APBK).
Figure 2. Anatomy of the Village Budget

The allocation of Village Fund distributed to villages in Banda Aceh has been increasing since 2015 (figure 1). The study found that the increase is not due to the increase in the village development budget need. Conversely, Village Fund is a top-down allocation from the central government, and there is no clear relationship between the performance of the Village Fund and its allocation in the following year. For village officials, the main legal basis for program prioritization guidelines in the Village Fund will be determined by a Mayor Regulation. Then, the village officials begin to manage serial meetings in the village levels to compile projects and programs will be outlined in the Long-term and Annual Village Development Plan (RPJMDes) according to the allocation of Village Fund and other revenues.

3.2. Disaster and Prioritization in Village Fund

The allocation of the Village Fund distributed to each village may vary depending on four determinants, including population, area size, and poverty rate, with a percentage of 30:20:50, respectively[1]. These factors are then multiplied by the level of difficulty of the village. Meanwhile, the process of Village Fund distribution is divided into three stages, namely April (40%), August (40%) and October (40%). Village Fund is basically intended for two aspects, namely village development, and community empowerment. Before the disbursement of Village Fund, the Ministry of Village, Development of Disadvantaged Regions, and Transmigration (DPDTT) published regulation on priority programs under the Village Fund. The term "disaster" first appeared in 2019 in [16] concerning priorities for the use of Village Funds in 2019. This means, from 2015 to 2018, disaster has not become one of the program priorities in Village Funds. Indicatively, the changes in priorities in 2019 arose due to consecutive natural disaster events in 2018: Sunda Strait tsunami, Lombok earthquake, and Palu earthquake and liquefaction. Disaster priority policy is continuing for the year 2020 Village Fund allocation under [17].

3.3. Factors Affecting Asymmetric Information of Village Fund

At the village level, the priority program policy related to the use of village funds for disaster management cannot be fully implemented due to the asymmetry of information. This study found that the priority transmitted from the central government up to the city level, whereas the information was missing in sub-district and village levels.

There are several factors that cause this information asymmetry in the village levels. First, disaster management has not been considered as a priority in the village development plan funded by the Village Fund. Program priorities were discussed at serial village meetings involving village leaders, including village officials, youth, and female groups, as well as religious leaders. Normally, the priorities will be taken into account on physical development and infrastructure procurement based projects. The disaster-related priority program, as mandated by [16,17], did not emerge during the serial meetings. Physical developments, for example, drainage channels construction, village roads, and procurement of public facilities, were politically considered more important than other projects. In some areas, permanent houses and shops were built and rented them to become revenue and assets for the village. Furthermore, physical projects were considered the easiest in terms of accounting, monitored conveniently, and the
benefit can still be seen and enjoyed for a number of periods. In contrast, non-physical development, such as community economic and social empowerment programs, were less desirable because the results are not physically visible and difficult to book in the accountings.

Second, although the disaster-related programs have been prioritized in the ministerial regulations, the more technical guidelines have not yet been published. Village officials considered mayor's regulations as their main technical guidelines related to the use of the Village Fund. This study indicates that the legal basis for using Village Fund for disaster risk financing is difficult to apply because Village Fund managers in the village levels assume that disaster programs are not mentioned in the mayor's regulations.

Third, village officials still adopted the traditional paradigm towards disasters, which risks are unlikely to be financed due to their uncertainty. The economic loss due to disaster events is assumed to be central, provincial, or city's responsibility. Additionally, under no disaster event, the unspent budgets need to be returned back to State Budgets, so that considered less performed villages in terms of spendings. To avoid this, the study found that village officials have placed a small number of funds for the preparation of unexpected events, including disasters in the allocation of unexpected spending (BTT). The study also found that this was a reflection of the city and provincial level budgetary system.

4. Conclusion

The village fund in Indonesia has been implemented since 2015. Although the program needs to be improved, especially in the monitoring aspects, it is expected as one of the budgetary decentralization instruments to accelerate development at the village level. In the case regions exposing the high risk of disasters, the Village Fund can be used as an alternative instrument for disaster risk financing in the village levels. Additionally, the central government has published regulations to accommodate this need.

In the implementation, however, asymmetric information towards the regulation existed, and the issue allegedly caused the management of village funds not to be connected with disaster risk reduction programs. Several factors have been identified to have effects on the information asymmetry at each level of policymakers. This asymmetry has led to disaster management programs not being a priority in the use of village funds. The absence of derivative regulation in the city levels hinders village leaders to use of village funds for disaster management. This study implies that the national plan to increase local government risk financing capacity is still ineffective. The dependency of local government towards the state budget in the case of a disaster will be still high in the near future.

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