

RESEARCH REPORT



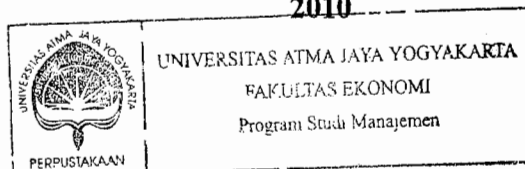
Regional Development for a Disastrous Country



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Abstract

The purpose of this research is to explore the relationship between social and economic factors on the economic loss and number of victims of natural disaster occurring in Indonesia using a pooled data from 2004 to 2008 of all provinces. This study found income as measured by GDRP per capita have negative impact on the number of deaths as well as in the number of houses destroyed. It also suggests that the impact of natural disasters can be lowered by enhancing not only economic development but also human development. Therefore, regional development should consider both of developments in order to reduce the impact of natural disasters. Other important finding of this study is the positive impact of government expenditure on the disaster impact related to the number of deaths. It means that large local government expenditure will not guarantee the regions in reducing the impact of natural disasters. The positive impact of government size on the disaster impact is an interesting topic for a further study that may be related to other issue such corruption in the distribution of aid regarding disasters. The study also suggests that further research may use other appropriate indicator of human development in estimating the benefit of human quality in reducing the impact of natural disaster.

Key words: regional development, natural disaster, Indonesia

JEL Classification: O1, R1, Q54

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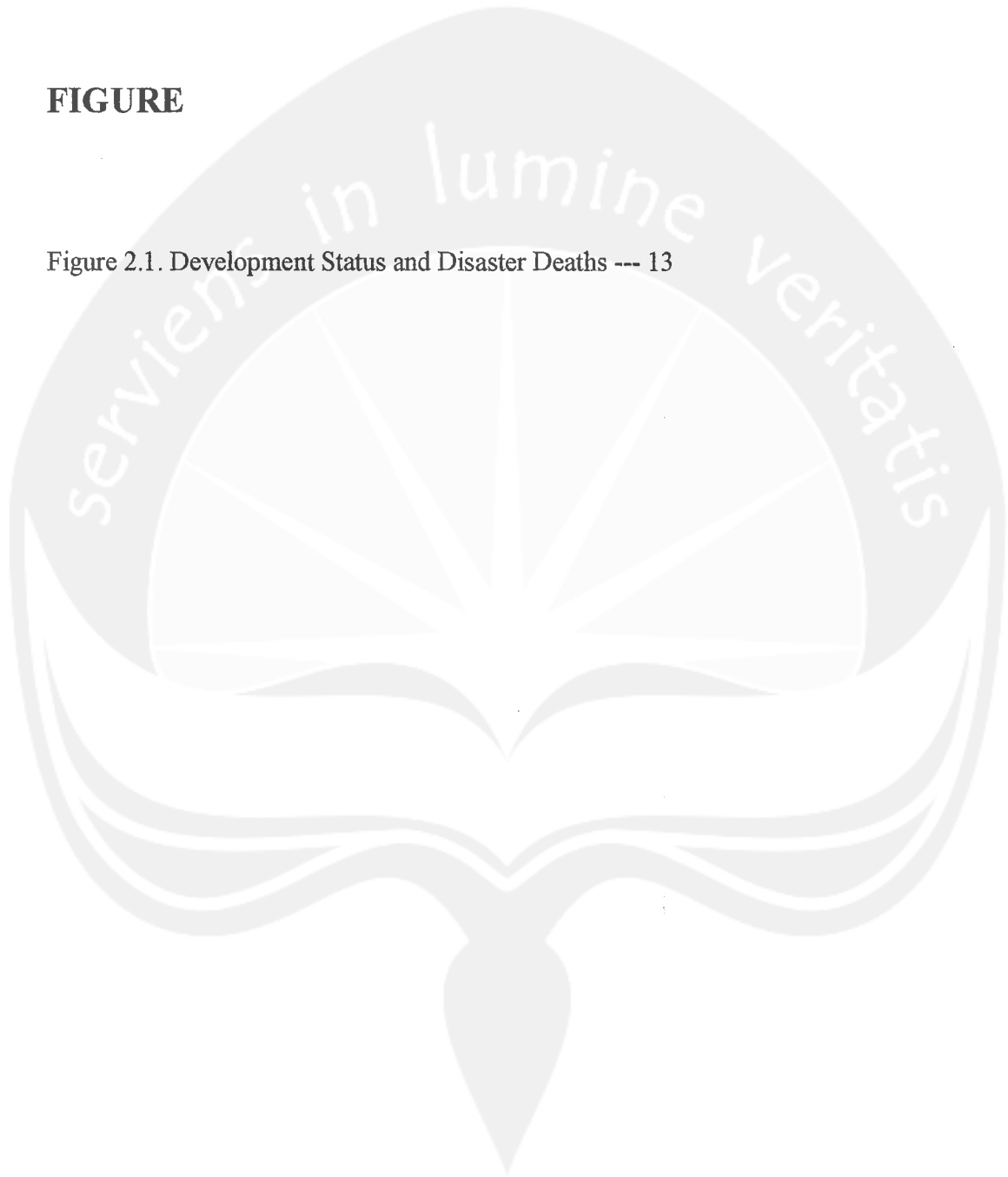
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CHAPTER - 1

INTRODUCTION

Indonesia is one of the disastrous countries in the world. *The Annual Disaster Statistical Review 2008* shows that the top ranking of disaster occurrence in several years were occupied by Indonesia, together with China, the United States, Philippines, and India (RODRIQUEZ *et al* 2009). EM-DAT summarized there are 390 disaster events in Indonesia during 1900-2010 that killed almost 240,000 people and the country suffered economic losses of about \$24 billions.¹ One government report said that total economic loss (direct and indirect losses) caused by seven big disasters during 2004-2007 are about 3.1 percent of gross domestic product of Indonesia in 2007 or 15.8 percent of central government budget in 2007 (Table 1.1). Meanwhile, according to the Indonesian Disaster Data and Information – National Management Disaster Agency (DIBI-BNPB), there were about 6,000 disaster events since 1997-2008. Those events include from climate change to social conflicts.

The statistic indicates that disasters are important issues that should be considered as a serious concern as they affect the development in Indonesia, including the regional level. The goal of this study is to explore the issue by analyzing the relationship between regional development and the disaster impacts. The general hypothesis used in this study shows that as the level of regional development increase, the impacts of disaster decrease. It means that the concern of this study is the impact of regional development on the impact of disasters but not the opposite relationship. This study will focuses only on natural disasters in 2004-2008.

¹ This statistic is included epidemic disasters. By definition, in order for a disaster to be entered into the EM-DAT: The OFDA/CRED International Disaster Database at least one of the following criteria has to be fulfilled: (1) 10 or more people reported killed, (2) 100 people reported affected, (3) a call for international assistance, (4) declaration of a state of emergency. See: <http://www.emdat.be/result-country-profile>.

Tabel 1.1. Economic Losses, Big Disasters 2004-2007

No	Name of disaster	Economic Loss (US\$ billions)		
		Direct	Indirect	Total
1	Tsunami, Aceh & Nias, December 26, 2004	2.92	1.53	4.45
2	Bird Flu (2004 -2005)	0.6	-	0.6
3	Merapi Eruption-April 2006	-	-	20,000 refugees
4	Yogyakarta Earthquake, May 27, 2006	2.5	0.7	3.1
5	Lapindo hot mud, Sidoarjo, East Java, May 29, 2006	1.2	1.8	3
6	Tsunami, South of Java, July 17, 2006	0.031	0.063	0.094
7	Flood, Jabodetabek, February 2007	0.7	-	0.7
TOTAL (US\$ billions)				12
3.1% of GDP (2007)				(Rp 110.4 trillions)
15.8% of total Government Budget (APBN) 2007				

Source: Bappenas 2009, Chapter 4.

CHAPTER - 2

LITERATURE REVIEW

2.1. From “dis-astro” to development concern

There was an evolution in putting natural disaster as a concern of development based on the actors and the main issues (UNDP 2004: 18). Up to 1970s, an idea that natural disasters were more than just an act of God was emphasized. The word “disaster” historically comes from astrology *dis+astro* or “bad star” and then it is beyond of human responsibilities (FREUDENBURG *et al* 2008). In this phase, natural disasters were understood synonymously with natural events such as earthquakes, volcanic eruptions, and cyclones. The consequence of this view was the magnitude of natural disaster was considered as a function of the magnitude of hazards.

Beginning in 1970s, technical professionals, such as engineers and architects, expressed concerns that those natural hazards had varying impacts on different kind of structures, such as buildings. Then, improving the quality of building foundations, for example was important in reducing disaster risks. However, costs were the main problems in this ideal solution. During the next decades, this concern then was shared by social sciences and humanities researchers. They argued that the capacity of people to absorb the impact and recover from losses and damaged was also important besides the resistance of a structure, in determining the impacts of natural disasters. By the end of 1990s, the emerged perspective was that all development activities had the potential to increase or reduce risks of natural disasters.

UNDP (2004) also contributes in explaining deeply the complex interactions between disaster and development (Table 2.1). The table shows that disaster can limit development both in economic and social. However, development may cause or reduce disaster risks. It means that we need attention on the development processes

that causes disaster risks while keeping the processes development that reduces risks of disaster.

Table 2.1. Disaster-Development Interactions

	Economics Development	Social Development
Disaster limits development	Destruction of fixed assets. Loss of production capacity, market access of material inputs. Damage to transport, communications or energy infrastructure. Erosion of livelihoods, savings and physical capital	Destruction of health or education infrastructure and personnel. Death, disablement or migration of key social actors leading to an erosion of social capital
Development causes disaster risk	Unsustainable development practises that create wealth for some at the expense of unsafe working or living conditions for others or degrade the environment	Development paths generating cultural norms that promote social isolation or political exclusion
Development reduces disaster risk	Access to adequate drinking water, food, waste management and a secure dwelling increase people's resiliency. Trade and technology can reduce poverty. Investing in financial mechanisms and social security can cushion against vulnerability	Building community cohesion, recognising excluded individuals and social groups (such as women), and providing opportunities for greater involvement in decision-making, enhanced educational and health capacity increases resiliency

Source: UNDP (2004: 20)

2.2. Choosing the focus: consequences of socio-economic factors

Table 2.1 can be used in classifying the relationship between development and disaster. In general, we can classify them into two types or groups of study. The first concerns on the impact of disaster on the economic development based on understanding that disaster limits development, and the second one is about the influence of development on reducing or increasing the disaster impacts. The concern of the first type of disaster studies is to explore the negative consequences of disasters mainly on economic growth, as conducted by BAADE, BAUMANN, and MATHESON (2007) in the case of the Hurricane Katrina and STROBL (2008) that focuses on the hurricane strikes in Central American and Caribbean Region.

Meanwhile, the second one concerns on how development should be addressed in order to reduce the disaster vulnerability. TOYA and SKIDMORE (2007) worked in this second type of disaster studies.

Many concerns have been emphasized on the impact of disasters mainly on the macroeconomic performances. HEWITT (1997) said that a consequence as many different functions and institutions can be destroyed all at once by disaster and cause a large crisis (in PELLING, OZERDEM, and BARAKAT 2002). There are a lot of potential disaster losses that can be classified into tangible and intangible losses that indicates the impacts of disaster not only in term of economic losses but also in social and cultural losses. Most of natural disasters can bring economic consequences immediately. According to the ADSR 2008, the economic costs caused by natural disasters in 2008 were over 190 million US\$, more than 235.000 people were killed and 214 million people were affected (RODRIQUEZ *et al* 2009). Moreover, there was an increase on the number of victims since 1990s that enhances the growing concern on the impact of natural disasters, mainly on the economic indicators.

Table 2.2. The Economic Impact of Disasters

Direct impacts	Physical damage, including that to productive capital and stocks (industrial plants, standing crops, inventories, etc.), economic infrastructure (roads, electricity supplies, etc.), and social infrastructure (homes, schools, etc.)
Indirect impacts	Downstream disruption to the flows of goods and services- e.g., lower output from damaged or destroyed assets and infrastructure and the loss of earnings as income generating opportunities are disrupted. Disruption of the provision of basic services, such as telecommunications or water supply, for instance, can have far-reaching implications. Indirect costs also include the costs of both medical expenses and lost productivity arising from the increased incidence of disease, injure and death. However, gross indirect costs are also partly offset by the positive downstream effects of the rehabilitation and reconstruction efforts, such as increased activity in the construction industry.
Secondary effects	Short-and long-term impacts of disaster on the overall economy and socio-economic conditions, e.g. fiscal and monetary performance, levels of household and national indebtedness, the distribution of income and income and incidence of poverty, the effect of relocating and restructuring elements of economy or workforce.

Source: BENSON (2002), quoted from UNDP (2004: 12).

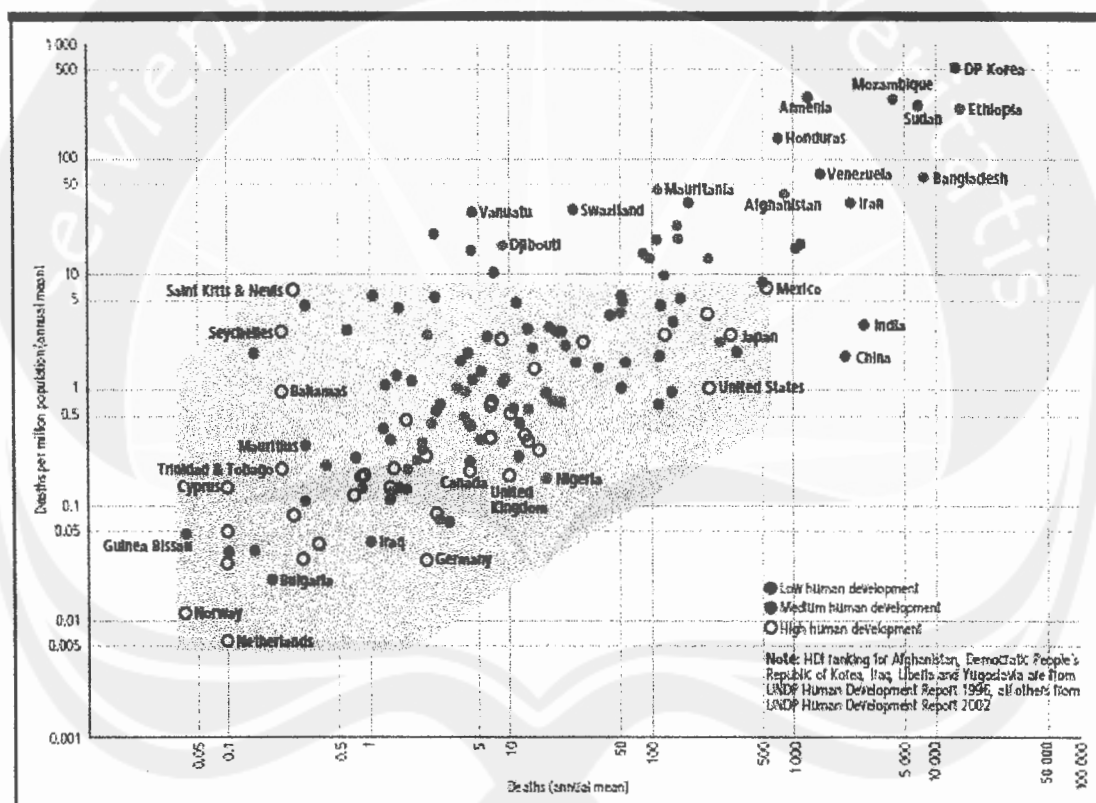
UNDP (2004) also gives a summary of impact of disasters on the economy (Table 2.2). Three categories of the economic impact of disasters are direct impacts, indirect impacts and secondary effects. Direct impacts refer to physical damages while indirect impacts rise as direct consequences of physical damages and costs in caring the victims. Positive impacts of rehabilitation and reconstruction activities in indirect impacts may offset this negative effect. However, benefits of these post-disaster activities may be questionable in term of its distribution. For example, TAKASAKI (2008) found, in the case of cyclone in rural Fiji, traditional kin elites who have power, such as the chief's clans, receive benefits earlier than other in recipient villages. The secondary effects include widely impacts of disaster on the overall socio-economic conditions in short and long term. The report also mentions that empirically direct costs were predominantly reported data on the disasters cost and the true cost of indirect and secondary impacts may unavailable for several years after a disaster event. However, it argues that the secondary effects of disasters can have impacts on long-term human and economic development as suggested by the ongoing research.

Although it is agreed that disasters may bring a highly damaging power on various aspects of life, however the important question is how to reduce the disaster vulnerability. BASHER (2008) gives a good statement for that issue that if a community is unable to cope the natural hazard it faces, then disasters arise. He mentions that a hazard by itself does not necessarily lead to a disaster. In other word, preparedness of community and of course underlying conditions that enable them to take preparation in facing natural disasters is one of the keys in determining whether a disaster will cause bigger losses or not.

As was mentioned in previous section, the word "disaster" historically comes from astrology that was *dis+astro* or "bad star" and then it is beyond of human responsibilities or just a product of the God's Hand. However, recent concern disagrees with the "dis+astro" reasons behind the natural disaster impacts. Based on analysis on the horrific images of disasters in several developing countries, EL-

MASRI and TIPPLE (2002) concluded that there is an importance of shifting from post-disaster emergency actions to pre-disaster mitigation mainly in urban areas.

Figure 2.1. Development Status and Disaster Deaths



Source: EM-DAT OFDA/CRED International Disaster Database

Source: UNDP (2004: 31)

During a major earthquake, a poor constructed building become vulnerable. If this building was destroyed by an earthquake, then number of people might be killed. It was argued that appropriate house design is important in strengthening the house structure that will increase its resilience. But why the building was constructed poorly? Constructing a better building of course needs more money. Therefore lack of income may reduce opportunity to have a better building. It may also be a result of bad policy in facing disaster vulnerability.

The above illustration indicates the connection between development level and natural disaster impacts. Moreover, according to UNDP (2004), natural disaster can be a cause and product of failed development. The report also mentions two important issues regarding many killed by natural disasters, 185 deaths per days. First, this statistic is only the tip of the iceberg in term of losses in the quality of life, livelihoods, and economic development. Second, the victims are unevenly distributed around the world. As indicated by Figure 2.1, losses from natural disaster are tied to development status. Countries with high human development recorded low number of deaths than other countries.

TOYA and SKIDMORE (2005) contributed an understanding of the relationship between economic development and the impacts of natural disasters. In their study they use a framework that show that because of the demand for safety rises with income then a good indicator of a country' safety level is its per capita income; thus it indicates protection against natural disasters. They analyze several socio-economic indicators, besides income (per capita GDP), that may determine the degree of exposure for society. These indicators are educational attainment (total years of schooling attainment), openness (export+import/GDP), financial development (M3/GDP), and size of government (government consumption/GDP). Other control variables are population, land area, and a series of dummy variables indicating type of disaster. The dependent variables are number of killed and economic damage/GDP.

Using data of disaster and economic development of 151 countries, TOYA and SKIDMORE found that countries with higher income, higher education attainment, more complete financial system and smaller government size experience fewer losses caused by natural disasters. They also conclude that the role of income in this relationship is as an underlying socio-economic fabric that can improve the level of safety. This finding supports confirms previous studies such as KHAN (2003). Using a data set on annual deaths from disasters in 48 nations from 1980 to 1999, KHAN found that as income rises, the number of deaths, injured, and homeless are

decreased. Rich countries do suffer less death from disasters than poorer countries although there is no different in number of disaster events experienced by both country groups.

Recent studies in this issue tend to focus on disaster in developing countries. CHHIBBER and LAAJAJ (2007) reviewed natural disasters and economic development in several developing countries and came with some interesting findings. One of the important finding is the impact of disaster will differ according to type of disaster, its frequency, contribution of international aid, and the socio-economic conditions of the country. YAMAMURA (2009) uses data set of 47 prefectures in Japan from 1988 to 2001 got three important findings. First, social capital reduces the damage caused by natural disaster. Second, the risk of a natural disaster makes people more apt to cooperate and then social capital is more effective to prevent disasters. Third, income is an important factor for reducing damages, but hardly influences it when the scale of a disaster is small.

Meanwhile, PADLI and HABIBULLAH (2009) focus their study on the fifteen Asian countries over the sample period from 1970 to 2005. Using a panel data analysis they found that a country at lower income level is more disaster resilience however at higher income level it become less disaster resistant. They also concluded that education attainment reduces number of deaths caused by disaster, larger population will increase death toll and larger land area will reduce disaster victims.

To sum up, there are many variables that may determine the number of losses caused by the natural disasters. Difference in socio-economic conditions as indication of regional diversity may cause different impact on the magnitude of disasters in term of losses. Since Indonesia is a disastrous country and the high impact of natural disasters was already known over the country, then the important issue that needs more examination is the impact of socio-economic measures on the size of impact of natural disasters. This issue is also related to the fact of regional diversity in term of socio-economic among the regions or provinces in Indonesia. In short, this study uses a framework of development increase/decrease risks of disaster.

CHAPTER - 3

RESEARCH METHOD

3.1. Data sources

There are two groups of data used in this study. The first group is data on natural disasters that taken from the Indonesian Disaster Data and Information – National Management Disaster Agency (DIBI-BNPB). This government institution provides several statistic of disaster in Indonesia which covers since 1990s to 2000s. The research focuses only on the period of 2004-2008. There are many types of disasters in the data base of disasters provided by DIBI-BPNP. It is consist of 527 events of 2004-2008. However, since this research focuses on the natural disaster then the database should be classified into several categories of disasters. According to Law No. 24/2007 on the Disaster Mitigation, there are three type disasters: natural disaster, non-natural disaster, and social disaster. Classifying using this definition resulted in 385 natural disaster events, 118 non-natural disaster events, and 24 social disaster events. Therefore, total observations for this study are 385 natural disaster events.

Details of natural disaster events that used in this study are presented at Table 3.1. This table shows that floods (including landslides) contribute more than 40 percent of natural disaster in Indonesia during 2004-2008. Earthquake (including tsunami) contributes only about 10 percent of total natural disaster. However, as already known, this type of disaster has destroyed power in a much larger scale than other type of natural disasters. It was known i.e. in the case of earthquake and tsunami in Aceh-Nias in 2004 (NAZARA and RESOSUDARMO 2007) and earthquake in Yogyakarta in 2006 (BAPPENAS *et al* 2006). Due to the above reason, this type of disaster should get a specific estimation tool. Dummy variable of earthquake and tsunami can be considered as the tool.

Table 3.1. Distribution of Natural Disaster Event Based on Type of Disasters

Type of Disaster	Frequency	Percent
Climate changes	1	.3
Earthquake	37	9.6
Earthquake and tsunami	5	1.3
Eruption	3	.8
Floods	107	27.8
Floods and landslides	53	13.8
Landslides	57	14.8
Strong wind	87	22.6
Surge	35	9.1
Total	385	100.0

One of the problems in the estimation is in selecting indicators of natural disaster. As described in the previous section, the impact of development will be estimated on the natural disasters. In the DIBI-BNPB database, there are several available indicators of the impact of disaster. This research chooses to classify these indicators into two groups. The first group is indicators of impact of disaster on the human being or labelled as “human loss”, and the second one is indicators on the economic side or “material loss”. Each group consist of selected indicators are shown in Table 3.2.²

These indicators will be used in the estimation. In the human loss model there are three estimations, as well as for the material loss model. This estimation strategy that provides several alternatives of losses caused by natural disasters is used to solve the problem of quality of data. For example, when data of economic loss is quite small then it should be accompanied by other indicators that perhaps give better estimation results.

² Other indicator in human losses is number of missing persons. However, the regression of this indicator was dropped since its number of observations is somewhat small, only 50 events.

3.2. Model

Model used in this study is referred mainly to TOYA and SKIDMORE (2005) and PADLI and HABIBULLAH (2009). The explanatory variables of disaster impacts are consist of real per capita gross domestic regional product (gdrpcap), human development index (HDI), expenditure of provincial government (provgov), and two dummy variables (*Eastern Indonesia dummy* and *Earthquake dummy*). Data of GDRP per capita and HDI are taken from the BADAN PUSAT STATISTIK (CBS), while data of provincial government expenditure is collected from publication supplied by the office of MINISTRY OF FINANCE. Both of these data are taken at provincial level.³

In general, there are two sets of regressions in logarithmic function that will be estimated, as following:

$$(1) \text{Log(Human loss)}_{jit} = \beta_0 + \beta_1 \text{Loggdrpcap}_{it} + \beta_2 \text{HDI}_{it} + \beta_3 \text{Logprovgov}_{it} + \beta_4 \text{Eastern}_{it} + \beta_5 \text{Eathquake}_{it}$$

$$(2) \text{Log(Material loss)}_{jit} = \beta_0 + \beta_1 \text{Loggdrpcap}_{it} + \beta_2 \text{HDI}_{it} + \beta_3 \text{Logprovgov}_{it} + \beta_4 \text{Eastern}_{it} + \beta_5 \text{Eathquake}_{it}$$

where $\text{Log(Human loss)}_{jit}$ and $\text{Log(Material loss)}_{jit}$ are logarithmic values of the total number of human losses and material losses caused by natural disaster j in province i in year t . The human loss and material loss are measured by indicators as described in Table 3.2.

³ Data of disasters are also provided at *kabupaten/kota* level. Using this level data in estimation of course needs data of explanatory variables at the same level. One of the problems at this level is availability of local government statistics. Therefore, the alternative chosen for this study is employing data at provincial level.

Tabel 3.2. Descriptive Statistics

Variable	Description	Obs.	Mean	Std. Dev.
Logdeath	Log of number of deaths	224	1.751	1.643
Loginjured	Log of number of persons injured	182	3.421	2.605
Logdisplaced	Log of number of persons displaced	183	7.376	2.237
Logeconloss	Log of economic loss in current local prices (Rp)	152	7.724	2.610
Loghousedes	Log of number of houses destroyed	339	4.112	2.140
Loghousedam	Log of number of houses damaged	203	5.253	2.212
Loggdrpcap	Log of GDRP per capita (Rp)	385	15.647	0.595
HDI	Human development index	385	69.249	3.226
Logprovgov	Log of provincial government expenditure (Rp)	360	28.076	0.917
Eastern (dummy)	Eastern province=1, otherwise=0	385	0.319	0.467
Earthquake (dummy)	Earthquake/tsunami event=1, otherwise=0	385	0.109	0.312

It should be noted that number of observations of estimations are depended on the data availability and the transformation processes of data into logarithmic value. Technically, a zero value can not be transformed into logarithms. Therefore, the disaster events with zero values, as well as cases with incomplete data will be dropped automatically in the estimation procedures. Thus, although number of disaster events in the database are 385 however the number of observation in the estimations are only between 149 and 316 events.⁴ Descriptive statistics used in the estimation are presented in Table 3.2. Least square procedure is employed in estimating the regression models using the Eviews.

⁴ Using the non logarithmic model may keep number of disaster events still as large as the total disasters in the database. However, the statistical fit of estimation results of this approach is somewhat low. Therefore, this study continues in using the logarithmic model that provides better results.

CHAPTER - 4

RESULTS AND DISCUSSIONS

Table 4.1 shows the empirical results for three indicators of human loss aspect. The adjusted R squared of the regressions is rather low, ranging from 3.6 percent (in “Logdisplaced” column) to 12.3 percent (in “Logdeath” column). Based on the explanatory power, the best estimation is human loss measured by number of deaths in column “Logdeath”. This estimation also used larger observations than other columns. There are three variables that influence number of deaths. These variables are Loggdrpcap, Logprovgov, and dummy variable of earthquake events.

In column “Logdeath”, the coefficient of regression indicates that as income rises, then the number of death will decrease. Meanwhile, the impact of the government expenditure on the human loss indicators is positive. It indicates that as size of government increase then the number of deaths that affected by natural disasters also increase. In all estimations, the human development index does not influence significantly on the human loss indicators. Dummy variable of earthquake events show significantly positive coefficient which confirms that number of human losses affected by earthquakes and tsunami are higher than losses affected by other natural disaster events.

Estimation results in Table 4.1 also indicate that number of deaths is the most appropriate indicator of human aspect of natural disaster. It implies that study on natural disaster in Indonesia may use deaths data as the main indicator in term of the human loss.

Table 4.1. Human Loss

Explanatory variables	Dependent variables		
	Logdeath	Loginjured	Logdisplaced
Constant	-3.706 (-1.052)	-23.395** (-2.422)	-2.333 (-0.268)
Loggdrpcap	-0.565* (-2.008)	0.381 (0.700)	0.267 (0.561)
HDI	0.002 (0.048)	0.087 (1.072)	0.072 (1.239)
Logprovgov	0.493* (3.454)	0.503*** (1.815)	0.006 (0.018)
Eastern	-0.077 (-0.271)	1.235** (2.048)	0.442 (0.853)
Earthquake	1.491** (2.582)	1.686* (3.109)	1.396* (2.651)
Number of Observations	213	175	170
Adjusted R2	0.123	0.064	0.036

Note: numbers in parentheses are t-statistics (White heteroscedasticity-consistent standard errors & covariance)

* significant at 1%, ** significant at 5%, *** significant at 10%

There are three indicators of material losses in Table 4.2. Explanatory powers of regression are ranging from 6.3 percent (in column “Logeconloss”) to 17.7 percent (in “Loghousesdes”). It suggests that the best fit model is the estimation which used number of destroyed houses as the independent variable. This estimation also has an advantage since its number of observation is near the sample size in the database of disaster events.

In the “Loghousesdes” column, only variable of government expenditure that does not significantly influence the number of houses destroyed. Negative coefficient of Loggdrpcap indicates that as income increase, then, number of houses destroyed because of natural disaster fall. In contrast to human loss, the impact of human development index in the material loss is negative and significant. It indicates that as the index increase, then number of houses destroyed fall. Consistent with human losses estimations, dummy variable of earthquake shows a positive coefficient that means earthquake and tsunami has larger impact in destroying houses than other

natural disaster events. Meanwhile, dummy variable of province in Eastern Indonesia shows a negative coefficient. This negative sign indicates that number of houses destroyed caused by natural disasters in the Eastern provinces of Indonesia is smaller than provinces in the Western part of this country.

Based on estimation results in Table 4.2, it can be concluded that the most appropriate indicator of material loss of natural disaster is number of destroyed houses. In cross-countries studies, economic loss is commonly used as indicator of material loss. However, in case of cross regions in Indonesia, this study implies that since economic loss data are not quite available or tend to underestimate, then the best indicator is number of destroyed houses.

Table 4.2. Material loss

Explanatory variables	Dependent variables		
	Logeconloss	Loghousesdes	Loghousesdam
Constant	19.820 (1.588)	17.867* (3.622)	15.730*** (2.092)
Loggdrpcap	0.641 (1.161)	-0.813* (-2.924)	-0.685 (-1.401)
HDI	-0.12 (-1.161)	-0.104** (-2.218)	-0.080 (-1.248)
Logprovgov	-0.491 (-1.455)	0.215 (1.293)	0.199 (0.827)
Eastern	-0.291 (-0.380)	-0.594*** (-1.836)	-0.523 (-1.069)
Earthquake	1.743 (1.625)	2.297* (4.891)	1.756* (3.686)
Number of Observations	150	317	195
Adjusted R2	0.063	0.177	0.094

Note: numbers in parentheses are t-statistics (White heteroscedasticity-consistent standard errors & covariance)

* significant at 1%, ** significant at 5%, *** significant at 10%

To summarize, the impact of income as measured by GDRP per capita on the number of deaths is negative as well as in the number of houses destroyed estimation. This result is consistent with TOYA and SKIDMORE (2007) in their cross country

studies. This finding could be interpreted that disaster vulnerability can be reduced by improving the economic development. People in provinces with better income are able to better prepare in facing natural disasters. This interpretation is also partially supported by the negative impact of human development index on the number of destroyed houses. As known, households or individuals with better human capability, such as in term of education are able to access information of vulnerability caused by natural disasters that enable them in preparing themselves in facing the disasters. It suggests that the impact of natural disasters can be lowered by enhancing not only economic development but also human development as indicated by UNDP (2004). An appropriate indicator of human development may be used to assess the benefit of human quality in reducing the impact of natural disaster.

There is also an intriguing question in regards to the positive impact of government expenditure as a measure of government size on the disaster impact related to the number of deaths. In their study, TOYA and SKIDMORE (2005) did not provide an exact prediction on the impact of government size on the natural disaster's indicator. They said that it is a priori ambiguous and proposed two expectations. If its impact is negative then it indicates a larger government may translate into greater public assistance and stronger social response to disaster risk and risk management. However, the opposite impact of this variable indicates that a larger government may be less responsive and less efficient at handling disaster response initiatives. Since they found positive and significant then they interpreted as indication that a larger public sector is associated with more deaths.

In the case of Indonesia, one of possible interpretations is larger government size does not guarantee in responding sufficiently to disaster events, moreover in which those disasters has high destroying power such as earthquake and tsunami. Lack of awareness on natural disaster will also reduce expenditure allocation for disaster prevention. Thus, its consequence is large local government expenditure will not guarantee the regions in reducing the impact of natural disasters. It should also be noted that there are problems in delivering aid for the victims of disasters. One of

crucial problems is corruption practices in the distribution of aid moreover in case of there is a massive flow of fund from various sources for natural disaster mitigation or emergency response on disasters (see NEGARA and BARY 2008). However, this corruption issue needs a further analysis that could be conducted by other research.



CHAPTER - 5

CONCLUSION

The purpose of this study is to explore the relationship between social and economic factors on the economic loss and number of victims of natural disaster occurring in Indonesia using a pooled data from 2004 to 2008 of all provinces. This study found income as measured by GDRP per capita have negative impact on the number of deaths as well as in the number of houses destroyed. It also suggests that the impact of natural disasters can be lowered by enhancing not only economic development but also human development. Therefore, regional development should consider both of developments in order to reduce the impact of natural disasters. Other important finding of this study is the positive impact of government expenditure on the disaster impact related to the number of deaths. It means that large local government expenditure will not guarantee the regions in reducing the impact of natural disasters.

The positive impact of government size on the disaster impact is an interesting issue for a further study that may be related to other issue such corruption in the distribution of aid regarding disasters. The study also suggests further research may use other appropriate indicator of human development in estimating the benefit of human quality in reducing the impact of natural disaster.***

REFERENCES

- BAADE R. A., BAUMANN R., and MATHESON V. (2007) Estimating the economic impact of natural and social disasters, with an application to Hurricane Katrina, *Urban Studies* 44(11), 2061-2076.
- BAPPENAS, THE PROVINCIAL AND LOCAL GOVERNMENTS OF DI YOGYAKARTA, THE PROVINCIAL AND LOCAL GOVERNMENT OF CENTRAL JAVA, and INTERNATIONAL PARTNERS. (2006) *Preliminary Damages and Loss Assessment Yogyakarta and Central Java Natural Disaster*. Bappenas, Jakarta. (available at <http://www.un.or.id/yogya/docs/Damage%20Assessment.pdf>)
- BAPPENAS (2009) *Telaah Sistem Terpadu Penanggulangan Bencana di Indonesia (Kebijakan, Strategi, dan Operasi)*. Bappenas, Jakarta.
- BASHER R. (2008) Disaster impacts: implications and policy responses, *Social Research* 75(3), 937-954.
- CHHIBBER A., and LAAJAJ R. (2007) Natural disasters and economic development: impact, response and preparedness. (available at http://depot.gdnet.org/cms/conference/papers/Chhibber_paper_plenary3.pdf)
- EL-MASRI S., and TIPPLE G. (2002) Natural disaster, mitigation and sustainability: the case of developing countries, *International Planning Studies* 7(2), 157-175.
- FREUDENBURG W. R., GRAMLING R., LASKA S., and ERIKSON K. T. (2008) Organizing hazards, engineering disasters? improving the recognition of political-economic factors in the creation of disasters, *Social Forces* 87(2), 1015-1038.
- KHAN M. E. (2003) The death toll from natural disasters: the role of income, geography and institutions, (available at SSRN: <http://ssrn.com/abstract=391741> or doi:10.2139/ssrn.391741).
- NAZARA S., and RESOSUDARMO B.P. (2007) *Aceh-Nias Reconstruction and Rehabilitation: Progress and Challenges at the End of 2006*. Discussion

- Paper No. 70. Tokyo, Asian Development Bank Institute (available at: <http://www.adbi.org/discussion-paper/2007/06/26/2288.acehnias.reconstruction.rehabilitation>)
- NEGARA S. D., and BARY P. (2008) Bencana alam: dampak dan penanganan sosial ekonomi, *Masyarakat Indonesia* 34(1), 115-134.
- PADLI J., and HABIBULLAH M. S. (2009) Natural disaster death and socio-economic factors in selected Asian countries: a panel analysis, *Asian Social Science* 5(4), 65-71.
- PALLING M., OZERDEM A., and BARAKAT S. (2002) The macro-economic impact of disasters, *Progress in Development Studies* 2, 4 (2002), 283-305.
- REPUBLIK INDONESIA (2007), *Undang-undang No. 24/2007 tentang Penanggulangan Bencana*.
- RODRIQUEZ J., et al. (2008) *Annual Disaster Statistical Review 2008*, CRED, Brussel.
- STROBL E. (2008) *The Macroeconomic Impact of Natural Disasters in Developing Countries: Evidence from Hurricane Strikes in the Central American and Caribbean Countries*. DDX-08-04. Ecole Polytechnique, Paris (available at: <http://ceco.polytechnique.fr/CDD/PDF/DDX-08-04.pdf>)
- TAKASAKI Y. (2009) *Do Local Elites Capture Natural Disaster Reconstruction Funds?* Tsukuba Economics Working Papers No. 2009-012. Department of Economics, University of Tsukuba, Tsukuba (available at: <http://www.econ.tsukuba.ac.jp/RePEc/2009-012.pdf>)
- TOYA H., and SKIDMORE M. (2005), *Economic Development and the Impact of Natural Disasters*. Working Paper 05-04. University of Wisconsin, Whitewater (available at: http://academics.uww.edu/business/economics/wpapers/05_04_skidmore.pdf)
- UNDP (2004) *Reducing Disaster Risk: a challenge for development*, UNDP, New York.
- YAMAMURA E (2009) *Effects of Interactions Among Social Capital, Income, and Learning from Experiences of Natural Disasters: A Case Study from Japan*. MPRA Paper No. 16223 (available at: http://mpra.ub.uni-muenchen.de/16223/2/MPRA_paper_16223.pdf)

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24	Sulawesi Utara	1	2004	STRONG WIND	0
24	Sulawesi Utara	1	2005	FLOODS AND LANDSLIDES	0
24	Sulawesi Utara	1	2006	FLOODS	0
24	Sulawesi Utara	1	2006	FLOODS AND LANDSLIDES	0
24	Sulawesi Utara	1	2006	LANDSLIDES	0
24	Sulawesi Utara	1	2006	SURGE	0
24	Sulawesi Utara	1	2007	EARTHQUAKE	1
24	Sulawesi Utara	1	2007	FLOODS	0
24	Sulawesi Utara	1	2007	FLOODS AND LANDSLIDES	0
24	Sulawesi Utara	1	2008	FLOODS	0
24	Sulawesi Utara	1	2008	FLOODS AND LANDSLIDES	0
24	Sulawesi Utara	1	2008	SURGE	0
25	Sulawesi Tengah	1	2004	EARTHQUAKE	1
25	Sulawesi Tengah	1	2004	FLOODS	0

25	Sulawesi Tengah	1	2004	SURGE	0
25	Sulawesi Tengah	1	2005	EARTHQUAKE	1
25	Sulawesi Tengah	1	2005	FLOODS	0
25	Sulawesi Tengah	1	2006	FLOODS	0
25	Sulawesi Tengah	1	2007	FLOODS	0
25	Sulawesi Tengah	1	2007	FLOODS AND LANDSLIDES	0
25	Sulawesi Tengah	1	2007	LANDSLIDES	0
25	Sulawesi Tengah	1	2008	EARTHQUAKE	1
25	Sulawesi Tengah	1	2008	FLOODS	0
25	Sulawesi Tengah	1	2008	FLOODS AND LANDSLIDES	0
25	Sulawesi Tengah	1	2008	LANDSLIDES	0
25	Sulawesi Tengah	1	2008	STRONG WIND	0
26	Sulawesi Selatan	1	2004	FLOODS	0
26	Sulawesi Selatan	1	2004	LANDSLIDES	0
26	Sulawesi Selatan	1	2004	STRONG WIND	0
26	Sulawesi Selatan	1	2005	FLOODS	0
26	Sulawesi Selatan	1	2005	STRONG WIND	0
26	Sulawesi Selatan	1	2006	FLOODS	0
26	Sulawesi Selatan	1	2006	FLOODS AND LANDSLIDES	0
26	Sulawesi Selatan	1	2006	LANDSLIDES	0
26	Sulawesi Selatan	1	2006	STRONG WIND	0
26	Sulawesi Selatan	1	2006	SURGE	0
26	Sulawesi Selatan	1	2007	FLOODS	0
26	Sulawesi Selatan	1	2007	FLOODS AND LANDSLIDES	0
26	Sulawesi Selatan	1	2007	STRONG WIND	0
26	Sulawesi Selatan	1	2007	SURGE	0
26	Sulawesi Selatan	1	2008	FLOODS	0
26	Sulawesi Selatan	1	2008	FLOODS AND LANDSLIDES	0
26	Sulawesi Selatan	1	2008	STRONG WIND	0
27	Sulawesi Tenggara	1	2005	EARTHQUAKE	1
27	Sulawesi Tenggara	1	2006	LANDSLIDES	0
27	Sulawesi Tenggara	1	2006	STRONG WIND	0
27	Sulawesi Tenggara	1	2008	STRONG WIND	0
28	Gorontalo	1	2004	FLOODS AND LANDSLIDES	0
28	Gorontalo	1	2005	FLOODS	0
28	Gorontalo	1	2006	FLOODS	0
28	Gorontalo	1	2006	FLOODS AND LANDSLIDES	0
28	Gorontalo	1	2007	FLOODS	0
28	Gorontalo	1	2007	FLOODS AND LANDSLIDES	0
28	Gorontalo	1	2007	SURGE	0
28	Gorontalo	1	2008	EARTHQUAKE	1
28	Gorontalo	1	2008	FLOODS	0
28	Gorontalo	1	2008	FLOODS AND LANDSLIDES	0
29	Sulawesi Barat	1	2007	FLOODS	0
29	Sulawesi Barat	1	2007	LANDSLIDES	0

29	Sulawesi Barat	1	2008	FLOODS	0
30	Maluku	1	2006	EARTHQUAKE	1
30	Maluku	1	2006	SURGE	0
30	Maluku	1	2008	FLOODS	0
30	Maluku	1	2008	FLOODS AND LANDSLIDES	0
30	Maluku	1	2008	LANDSLIDES	0
30	Maluku	1	2008	STRONG WIND	0
31	Maluku Utara	1	2004	FLOODS	0
31	Maluku Utara	1	2005	STRONG WIND	0
31	Maluku Utara	1	2006	EARTHQUAKE	1
31	Maluku Utara	1	2006	FLOODS	0
31	Maluku Utara	1	2007	EARTHQUAKE	1
31	Maluku Utara	1	2007	STRONG WIND	0
31	Maluku Utara	1	2007	SURGE	0
32	Papua Barat	1	2008	EARTHQUAKE	1
33	Papua	1	2004	EARTHQUAKE	1
33	Papua	1	2004	FLOODS	0
33	Papua	1	2005	FLOODS	0
33	Papua	1	2006	CLIMATE CHANGE	0
33	Papua	1	2006	FLOODS	0
33	Papua	1	2006	LANDSLIDES	0
33	Papua	1	2006	SURGE	0
33	Papua	1	2008	FLOODS AND LANDSLIDES	0
33	Papua	1	2008	LANDSLIDES	0
33	Papua	1	2008	SURGE	0

1	Nanggroe Aceh D.	128728	2830	50970	179312	0
1	Nanggroe Aceh D.	0	0	11557	11	0
1	Nanggroe Aceh D.	62	0	81816	9558	11009
1	Nanggroe Aceh D.	20	251	3675	151	0
1	Nanggroe Aceh D.	15	18	750	80	26
1	Nanggroe Aceh D.	0	0	200	20	20
1	Nanggroe Aceh D.	0	0	15000	100	706
1	Nanggroe Aceh D.	44	20	60114	17660	23453
1	Nanggroe Aceh D.	2	0	275	24	0
1	Nanggroe Aceh D.	0	2	0	24	8
1	Nanggroe Aceh D.	0	0	0	15	0
1	Nanggroe Aceh D.	3	0	34634	32	109
1	Nanggroe Aceh D.	1	0	0	34	0
1	Nanggroe Aceh D.	4	88	24	671	2419
1	Nanggroe Aceh D.	4	5	162264	9	0
1	Nanggroe Aceh D.	9	0	90	5	0
1	Nanggroe Aceh D.	0	0	1794	89	308
2	Sumatera Utara	130	1832	4012	0	0
2	Sumatera Utara	1	0	2200	118	103
2	Sumatera Utara	0	0	0	2	0
2	Sumatera Utara	0	0	0	25	0
2	Sumatera Utara	0	2	150	901	32
2	Sumatera Utara	853	6278	22316	46757	728
2	Sumatera Utara	0	0	0	20	878
2	Sumatera Utara	3	3	31	16	0
2	Sumatera Utara	0	2	0	72	0
2	Sumatera Utara	4	1719	7925	847	463
2	Sumatera Utara	25	11508	58371	751	730
2	Sumatera Utara	0	0	0	2	0
2	Sumatera Utara	34	12	3050	22	0
2	Sumatera Utara	0	3	0	1164	323
2	Sumatera Utara	1	0	7186	1	0
2	Sumatera Utara	7	183	254	49	0
2	Sumatera Utara	5	0	0	4	1
2	Sumatera Utara	0	1	0	39	102
2	Sumatera Utara	0	0	0	10	0
2	Sumatera Utara	1	205	300	79	242
2	Sumatera Utara	3	144	662	0	0
2	Sumatera Utara	0	37	1134	165	349
3	Sumatera Barat	7	34	0	430	769
3	Sumatera Barat	0	0	600	74	0
3	Sumatera Barat	43	14	0	0	0
3	Sumatera Barat	0	0	0	45	0
3	Sumatera Barat	1	0	0	838	2168
3	Sumatera Barat	0	5	17000	21	0

3	_Sumatera Barat	25	6	0	62	1458
3	_Sumatera Barat	23	9	0	16	0
3	_Sumatera Barat	0	3	0	123	190
3	_Sumatera Barat	0	0	573	181	100
3	_Sumatera Barat	4	3	0	881	994
3	_Sumatera Barat	0	0	0	43	917
3	_Sumatera Barat	29	15	2696	13	0
3	_Sumatera Barat	0	0	0	9	15
3	_Sumatera Barat	77	876	141216	23396	52948
3	_Sumatera Barat	2	1	160	5	189
3	_Sumatera Barat	0	3	0	9	0
3	_Sumatera Barat	28	0	0	28	0
3	_Sumatera Barat	0	0	0	20	19
3	_Sumatera Barat	1	3	3828	599	765
3	_Sumatera Barat	2	2	500	182	161
3	_Sumatera Barat	4	0	0	0	0
3	_Sumatera Barat	0	0	0	8	15
3	_Sumatera Barat	10	2	332	12	5
3	_Sumatera Barat	0	0	0	24	0
3	_Sumatera Barat	0	0	0	36	0
4	_Riau	5	0	235	15	0
4	_Riau	0	0	0	16	0
4	_Riau	0	0	0	202	0
4	_Riau	9	313	4358	38	217
4	_Riau	7	363	288	0	0
4	_Riau	2	4659	18323	108	80
4	_Riau	2	6	0	0	0
5	_Jambi	0	0	0	131	354
5	_Jambi	0	0	0	89	0
5	_Jambi	0	0	0	8	63
5	_Jambi	0	0	0	4	6
5	_Jambi	3	0	0	0	0
5	_Jambi	0	1	0	9	22
6	_Sumatera Selatan	0	0	359	59	713
6	_Sumatera Selatan	0	0	50	50	18
6	_Sumatera Selatan	0	0	0	89	25
6	_Sumatera Selatan	3	0	0	0	0
6	_Sumatera Selatan	2	1065	0	24	0
6	_Sumatera Selatan	0	0	0	26	0
6	_Sumatera Selatan	0	2	0	30	918
6	_Sumatera Selatan	1	29	0	194	682
6	_Sumatera Selatan	0	0	0	32	69
7	_Bengkulu	0	1	0	9	1397
7	_Bengkulu	15	38	0	24170	35041
7	_Bengkulu	1	0	0	14	21

8	Lampung	0	0	0	264	17
8	Lampung	0	0	0	226	194
8	Lampung	9	0	0	0	0
8	Lampung	0	0	0	15	0
8	Lampung	0	4	0	688	298
8	Lampung	0	0	0	1	0
8	Lampung	0	0	0	7	1
8	Lampung	0	0	0	316	735
8	Lampung	0	0	0	105	100
8	Lampung	5	289	740	1124	2488
8	Lampung	0	0	120	38	196
8	Lampung	1	0	0	2	0
8	Lampung	0	3	0	79	159
8	Lampung	1	0	0	0	0
9	Bangka Belitung	0	0	76	14	10
9	Bangka Belitung	0	0	0	67	88
10	Kepulauan Riau	0	0	0	34	0
10	Kepulauan Riau	1	100	0	96	0
11	DKI Jakarta	2	0	1000	0	0
11	DKI Jakarta	0	0	0	2	0
11	DKI Jakarta	0	2	0	4	12
11	DKI Jakarta	3	4	0	0	0
11	DKI Jakarta	0	0	0	11	0
11	DKI Jakarta	48	484	521389	7083	17874
11	DKI Jakarta	0	0	0	5	0
11	DKI Jakarta	8	0	38493	0	0
11	DKI Jakarta	0	0	0	1	2
12	Jawa Barat	11	0	2301	142	0
12	Jawa Barat	15	15	207	43	0
12	Jawa Barat	28	30	2461	389	191
12	Jawa Barat	0	0	100	154	331
12	Jawa Barat	0	0	561	19	0
12	Jawa Barat	5	2	2702	160	394
12	Jawa Barat	168	12	353	218	195
12	Jawa Barat	0	1	0	422	377
12	Jawa Barat	0	0	0	4	0
12	Jawa Barat	478	484	5840	1726	419
12	Jawa Barat	14	3636	7000	223	238
12	Jawa Barat	2	3	0	60	0
12	Jawa Barat	35	147	1011	494	576
12	Jawa Barat	0	2	0	379	527
12	Jawa Barat	0	0	0	100	0
12	Jawa Barat	1	0	0	20	5
12	Jawa Barat	16	8182	334467	76	31
12	Jawa Barat	15	170	9246	386	2039

12	Jawa Barat	9	10	0	137	106
12	Jawa Barat	1	6	0	153	3095
12	Jawa Barat	0	3	646	109	69
12	Jawa Barat	10	2303	2315	82	725
12	Jawa Barat	19	36	2488	485	234
12	Jawa Barat	12	19	75	43	47
12	Jawa Barat	0	14	0	168	221
12	Jawa Barat	4	1	0	0	0
13	Jawa Tengah	19	0	4411	108	0
13	Jawa Tengah	14	2	39308	32	0
13	Jawa Tengah	22	11	289	315	13
13	Jawa Tengah	5	11	1000	689	239
13	Jawa Tengah	0	0	0	88	0
13	Jawa Tengah	5	0	23015	32	0
13	Jawa Tengah	1	0	0	52	7
13	Jawa Tengah	9	5	333	280	21
13	Jawa Tengah	1	0	0	408	1107
13	Jawa Tengah	1063	18526	761871	33895	65835
13	Jawa Tengah	169	33	887	51	166
13	Jawa Tengah	9	0	1768	188	0
13	Jawa Tengah	10	6	373	5	0
13	Jawa Tengah	84	25	980	388	74
13	Jawa Tengah	0	0	0	267	173
13	Jawa Tengah	7	0	7180	466	12292
13	Jawa Tengah	78	91	501	1166	2566
13	Jawa Tengah	21	15	12	88	188
13	Jawa Tengah	0	8	0	119	485
13	Jawa Tengah	0	0	0	6	0
13	Jawa Tengah	10	9	114	1	0
13	Jawa Tengah	16	5433	3460	64	46
13	Jawa Tengah	17	79	931	105	56
13	Jawa Tengah	3	8	0	141	515
14	Yogyakarta	0	0	0	10	0
14	Yogyakarta	0	0	0	15	0
14	Yogyakarta	4710	20288	1403617	95903	107019
14	Yogyakarta	3	0	0	0	0
14	Yogyakarta	2	0	4590	0	0
14	Yogyakarta	0	0	0	16	0
14	Yogyakarta	8	54	700	2	1291
14	Yogyakarta	5	7	0	0	0
15	Jawa Timur	2	7	0	0	0
15	Jawa Timur	34	7	11444	828	157
15	Jawa Timur	7	85	136	376	386
15	Jawa Timur	2	5	325	56	41
15	Jawa Timur	2	40	0	869	766

15	Jawa Timur	11	0	100	14	11
15	Jawa Timur	1	1	0	72	105
15	Jawa Timur	1	0	0	72	0
15	Jawa Timur	0	0	0	20	0
15	Jawa Timur	0	0	0	15	0
15	Jawa Timur	0	0	300	1	0
15	Jawa Timur	6	0	1219	295	23
15	Jawa Timur	111	589	8146	299	860
15	Jawa Timur	0	200	818	10	56
15	Jawa Timur	2	50	0	52	701
15	Jawa Timur	0	24	797	135	190
15	Jawa Timur	9	2	40487	332	1326
15	Jawa Timur	26	0	0	396	580
15	Jawa Timur	2	0	232	58	0
15	Jawa Timur	5	18	40	288	1323
15	Jawa Timur	0	0	0	3	0
15	Jawa Timur	21	26092	34121	3510	4535
15	Jawa Timur	2	0	153	3	59
15	Jawa Timur	9	7	0	116	228
15	Jawa Timur	1	49	110	251	714
16	Banten	1	0	0	17	356
16	Banten	0	0	55	43	0
16	Banten	0	0	0	114	61
16	Banten	0	0	0	8	152
16	Banten	1	0	100	34	0
16	Banten	1	0	0	27	0
16	Banten	14	1	41962	0	0
16	Banten	1	0	0	22	2
16	Banten	6	5	0	6	16
16	Banten	2	25	0	33	318
16	Banten	7	13172	1227	0	26623
16	Banten	0	0	0	3	0
16	Banten	1	7	0	0	0
17	Bali	0	9	0	4101	0
17	Bali	1	0	0	1008	0
17	Bali	0	0	640	400	0
17	Bali	1	7	0	2900	0
17	Bali	1	0	0	0	0
17	Bali	0	0	0	49	63
17	Bali	2	3	0	2	0
17	Bali	0	0	0	34	0
17	Bali	1	0	0	0	0
17	Bali	2	0	0	0	0
17	Bali	6	20	0	4	268
17	Bali	0	0	10	6	0

17	Bali	0	0	0	10	0
17	Bali	3	0	0	0	0
17	Bali	1	2	0	0	0
18	Nusa Tenggara Barat	0	25	3677	2424	6732
18	Nusa Tenggara Barat	0	2	0	263	1095
18	Nusa Tenggara Barat	0	0	180	1001	54
18	Nusa Tenggara Barat	0	0	1045	71	0
18	Nusa Tenggara Barat	0	0	9810	321	0
18	Nusa Tenggara Barat	3	3	120	4	0
18	Nusa Tenggara Barat	1	9	1526	215	425
18	Nusa Tenggara Barat	3	52	1018	64	1803
18	Nusa Tenggara Barat	4	46	16216	1013	2503
18	Nusa Tenggara Barat	1	0	1080	305	136
18	Nusa Tenggara Barat	0	0	29	15	0
18	Nusa Tenggara Barat	3	200	40625	1810	7040
18	Nusa Tenggara Barat	1	692	250	92	0
18	Nusa Tenggara Barat	0	0	0	36	335
18	Nusa Tenggara Barat	0	11	0	401	1105
18	Nusa Tenggara Barat	0	0	300	194	263
18	Nusa Tenggara Barat	0	0	0	1	0
19	Nusa Tenggara Timur	33	310	265	10546	5505
19	Nusa Tenggara Timur	7	3	4411	854	748
19	Nusa Tenggara Timur	3	0	0	491	526
19	Nusa Tenggara Timur	0	0	0	25	0
19	Nusa Tenggara Timur	3	11	1080	343	59
19	Nusa Tenggara Timur	0	0	0	332	362
19	Nusa Tenggara Timur	36	0	14658	16612	0
19	Nusa Tenggara Timur	4	307	1077	243	277
19	Nusa Tenggara Timur	9	12	0	6	310
19	Nusa Tenggara Timur	0	0	0	56	0
19	Nusa Tenggara Timur	0	5	123	401	299
19	Nusa Tenggara Timur	0	0	0	2	0
19	Nusa Tenggara Timur	0	656	800	131	893
19	Nusa Tenggara Timur	43	32	5818	94	0
19	Nusa Tenggara Timur	0	0	0	10	0
19	Nusa Tenggara Timur	0	0	0	232	28
19	Nusa Tenggara Timur	0	0	0	9	0
19	Nusa Tenggara Timur	22	1407	14396	595	3912
19	Nusa Tenggara Timur	8	2	169	187	33
19	Nusa Tenggara Timur	2	1	0	1692	183
19	Nusa Tenggara Timur	4	0	0	737	72
20	Kalimantan Barat	0	0	6257	13	0
20	Kalimantan Barat	0	4	0	104	60
20	Kalimantan Barat	1	0	279	0	0
20	Kalimantan Barat	0	0	0	23	43

20	Kalimantan Barat	0	62	0	10	0
20	Kalimantan Barat	1	0	5200	27	0
20	Kalimantan Barat	1	1	0	0	0
21	Kalimantan Tengah	2	0	600	0	0
21	Kalimantan Tengah	3	0	0	26	2
21	Kalimantan Tengah	4	455	960	0	0
22	Kalimantan Selatan	9	0	106651	138	7758
22	Kalimantan Selatan	0	0	0	8	0
22	Kalimantan Selatan	0	0	0	10	0
22	Kalimantan Selatan	7	11	46372	72	775
22	Kalimantan Selatan	1	0	0	0	0
22	Kalimantan Selatan	10	32	0	20	0
22	Kalimantan Selatan	0	0	0	8	31
22	Kalimantan Selatan	8	7	3156	141	112
22	Kalimantan Selatan	1	0	94	44	38
23	Kalimantan Timur	2	0	100	0	0
23	Kalimantan Timur	0	0	0	14	0
23	Kalimantan Timur	0	0	0	11	0
23	Kalimantan Timur	20	0	0	0	0
23	Kalimantan Timur	0	0	0	29	0
23	Kalimantan Timur	2	0	0	10	0
23	Kalimantan Timur	3	0	66971	0	0
23	Kalimantan Timur	0	0	0	2	41
23	Kalimantan Timur	0	0	0	20	0
23	Kalimantan Timur	3	1813	11088	2	0
23	Kalimantan Timur	10	842	184	15	3
23	Kalimantan Timur	0	0	0	9	0
23	Kalimantan Timur	1	238	0	0	0
23	Kalimantan Timur	4	107	1150	9	0
23	Kalimantan Timur	5	8	0	0	0
24	Sulawesi Utara	0	0	5000	3	0
24	Sulawesi Utara	0	0	0	10	0
24	Sulawesi Utara	1	2	0	9	10920
24	Sulawesi Utara	6	2313	25378	142	173
24	Sulawesi Utara	34	18893	27607	1099	3133
24	Sulawesi Utara	4	0	0	0	0
24	Sulawesi Utara	0	0	712	94	89
24	Sulawesi Utara	6	8	9661	2	0
24	Sulawesi Utara	5	0	477	23	0
24	Sulawesi Utara	37	29	5702	681	188
24	Sulawesi Utara	1	0	0	50	0
24	Sulawesi Utara	1	5	0	8	0
24	Sulawesi Utara	0	0	245	163	160
25	Sulawesi Tengah	3	0	0	116	113
25	Sulawesi Tengah	2	0	0	91	12

25	Sulawesi Tengah	0	0	0	71	0
25	Sulawesi Tengah	0	3	0	50	0
25	Sulawesi Tengah	1	0	0	0	0
25	Sulawesi Tengah	0	0	1000	10	0
25	Sulawesi Tengah	1	2711	7988	3	0
25	Sulawesi Tengah	78	2380	17799	294	62
25	Sulawesi Tengah	6	5	405	5	0
25	Sulawesi Tengah	3	159	18507	1185	546
25	Sulawesi Tengah	3	18	1068	275	191
25	Sulawesi Tengah	1	39	260	47	11
25	Sulawesi Tengah	1	0	139	25	6
25	Sulawesi Tengah	0	0	0	7	13
26	Sulawesi Selatan	0	0	0	66	0
26	Sulawesi Selatan	36	16	200	78	417
26	Sulawesi Selatan	0	20	0	2121	84
26	Sulawesi Selatan	0	0	400	208	0
26	Sulawesi Selatan	0	0	0	152	0
26	Sulawesi Selatan	5	0	95	42	0
26	Sulawesi Selatan	223	35	9178	1126	1873
26	Sulawesi Selatan	0	0	0	11	0
26	Sulawesi Selatan	3	3	0	362	1006
26	Sulawesi Selatan	0	0	0	10	0
26	Sulawesi Selatan	6	0	10304	3	0
26	Sulawesi Selatan	15	0	4800	6	0
26	Sulawesi Selatan	1	0	0	196	315
26	Sulawesi Selatan	0	0	0	14	0
26	Sulawesi Selatan	9	244	11722	644	3149
26	Sulawesi Selatan	3	0	0	0	0
26	Sulawesi Selatan	2	8	0	63	60
27	Sulawesi Tenggara	0	0	0	101	0
27	Sulawesi Tenggara	2	0	0	0	0
27	Sulawesi Tenggara	0	0	0	25	0
27	Sulawesi Tenggara	0	2	0	19	0
28	Gorontalo	0	0	1281	38	1000
28	Gorontalo	0	0	0	2	5
28	Gorontalo	1	0	0	0	0
28	Gorontalo	2	1	0	1	0
28	Gorontalo	0	0	2010	10	0
28	Gorontalo	2	3555	1808	401	866
28	Gorontalo	0	0	0	83	0
28	Gorontalo	3	272	4433	233	347
28	Gorontalo	0	2339	12991	3	0
28	Gorontalo	0	628	0	31	190
29	Sulawesi Barat	1	0	0	0	0
29	Sulawesi Barat	8	0	0	5	0

29	_ Sulawesi Barat	3	10	3000	39	0
30	_ Maluku	6	1	4389	337	0
30	_ Maluku	0	1	2108	298	97
30	_ Maluku	0	0	0	197	26
30	_ Maluku	7	296	1552	97	5
30	_ Maluku	3	0	0	0	0
30	_ Maluku	0	0	0	8	6
31	_ Maluku Utara	0	0	1218	15	0
31	_ Maluku Utara	0	0	0	3	10
31	_ Maluku Utara	0	0	0	57	34
31	_ Maluku Utara	0	0	847	52	29
31	_ Maluku Utara	0	25	2435	92	511
31	_ Maluku Utara	0	0	0	1	0
31	_ Maluku Utara	1	1	60	3	5
32	_ Papua Barat	0	38	238	37	17
33	_ Papua	107	1641	3500	5146	4459
33	_ Papua	0	0	0	58	1019
33	_ Papua	0	0	45	182	0
33	_ Papua	95	0	0	0	0
33	_ Papua	3	0	0	67	0
33	_ Papua	3	31	0	0	0
33	_ Papua	0	0	2234	8	0
33	_ Papua	12	8	0	6	1
33	_ Papua	19	0	0	0	0
33	_ Papua	0	0	2520	5	300

1	Nanggroe Aceh D.	42700000	9.906.340,7	68,7	1.963.266,4
1	Nanggroe Aceh D.	0	9.906.340,7	68,7	1.963.266,4
1	Nanggroe Aceh D.	0	8.986.828,6	69,1	na
1	Nanggroe Aceh D.	0	8.986.828,6	69,1	na
1	Nanggroe Aceh D.	0	8.986.828,6	69,1	na
1	Nanggroe Aceh D.	0	8.986.828,6	69,1	na
1	Nanggroe Aceh D.	0	9.091.414,9	69,4	na
1	Nanggroe Aceh D.	0	9.091.414,9	69,4	na
1	Nanggroe Aceh D.	0	9.091.414,9	69,4	na
1	Nanggroe Aceh D.	0	9.091.414,9	69,4	na
1	Nanggroe Aceh D.	0	9.091.414,9	69,4	na
1	Nanggroe Aceh D.	0	8.519.127,5	70,4	4.047.191,0
1	Nanggroe Aceh D.	0	8.519.127,5	70,4	4.047.191,0
1	Nanggroe Aceh D.	0	7.938.116,6	70,8	8.518.740,0
1	Nanggroe Aceh D.	0	7.938.116,6	70,8	8.518.740,0
1	Nanggroe Aceh D.	30	7.938.116,6	70,8	8.518.740,0
1	Nanggroe Aceh D.	2	7.938.116,6	70,8	8.518.740,0
2	Sumatera Utara	0	6.904.550,5	71,4	1.501.539,0
2	Sumatera Utara	3300	6.904.550,5	71,4	1.501.539,0
2	Sumatera Utara	0	6.904.550,5	71,4	1.501.539,0
2	Sumatera Utara	0	6.904.550,5	71,4	1.501.539,0
2	Sumatera Utara	1538	6.904.550,5	71,4	1.501.539,0
2	Sumatera Utara	0	6.904.550,5	71,4	1.501.539,0
2	Sumatera Utara	500	7.058.476,1	72,0	1.646.276,4
2	Sumatera Utara	271	7.058.476,1	72,0	1.646.276,4
2	Sumatera Utara	0	7.058.476,1	72,0	1.646.276,4
2	Sumatera Utara	2000	7.405.174,2	72,5	2.268.990,6
2	Sumatera Utara	127100	7.405.174,2	72,5	2.268.990,6
2	Sumatera Utara	0	7.405.174,2	72,5	2.268.990,6
2	Sumatera Utara	0	7.405.174,2	72,5	2.268.990,6
2	Sumatera Utara	700	7.405.174,2	72,5	2.268.990,6
2	Sumatera Utara	0	7.775.375,0	72,8	2.717.859,0
2	Sumatera Utara	6000	7.775.375,0	72,8	2.717.859,0
2	Sumatera Utara	0	7.775.375,0	72,8	2.717.859,0
2	Sumatera Utara	250	7.775.375,0	72,8	2.717.859,0
2	Sumatera Utara	0	7.775.375,0	72,8	2.717.859,0
2	Sumatera Utara	0	8.140.616,3	73,3	3.289.160,0
2	Sumatera Utara	0	8.140.616,3	73,3	3.289.160,0
2	Sumatera Utara	0	8.140.616,3	73,3	3.289.160,0
3	Sumatera Barat	16200	8.140.616,3	73,3	3.289.160,0
3	Sumatera Barat	1742	8.140.616,3	73,3	3.289.160,0
3	Sumatera Barat	0	6.090.308,9	70,5	652.865,0
3	Sumatera Barat	0	6.090.308,9	70,5	652.865,0
3	Sumatera Barat	12743	7.058.476,1	72,0	1.646.276,4
3	Sumatera Barat	50000	6.623.993,2	71,2	831.197,8

3	Sumatera Barat	0	6.623.993,2	71,2	831.197,8
3	Sumatera Barat	0	6.623.993,2	71,2	831.197,8
3	Sumatera Barat	1626	6.623.993,2	71,2	831.197,8
3	Sumatera Barat	1600	6.623.993,2	71,2	831.197,8
3	Sumatera Barat	114790	6.989.599,2	71,7	1.014.238,4
3	Sumatera Barat	16481	6.989.599,2	71,7	1.014.238,4
3	Sumatera Barat	3100	6.989.599,2	71,7	1.014.238,4
3	Sumatera Barat	200	6.989.599,2	71,7	1.014.238,4
3	Sumatera Barat	0	7.006.038,7	72,2	1.203.934,0
3	Sumatera Barat	2000	7.006.038,7	72,2	1.203.934,0
3	Sumatera Barat	4426,05	7.006.038,7	72,2	1.203.934,0
3	Sumatera Barat	0	7.006.038,7	72,2	1.203.934,0
3	Sumatera Barat	1395	7.006.038,7	72,2	1.203.934,0
3	Sumatera Barat	1359,808	7.006.038,7	72,2	1.203.934,0
3	Sumatera Barat	0	7.349.818,7	73,0	1.485.860,0
3	Sumatera Barat	0	7.349.818,7	73,0	1.485.860,0
3	Sumatera Barat	0	7.349.818,7	73,0	1.485.860,0
3	Sumatera Barat	0	7.349.818,7	73,0	1.485.860,0
3	Sumatera Barat	0	7.349.818,7	73,0	1.485.860,0
3	Sumatera Barat	0	7.349.818,7	73,0	1.485.860,0
4	Riau	40000	13.243.312,8	72,2	1.970.452,9
4	Riau	500	13.243.312,8	72,2	1.970.452,9
4	Riau	15000	12.980.090,8	73,6	2.439.895,7
4	Riau	107650	13.088.870,1	73,8	3.188.585,3
4	Riau	69500	17.001.234,4	74,6	4.187.692,0
4	Riau	0	17.552.875,6	75,1	4.358.508,0
4	Riau	0	17.552.875,6	75,1	4.358.508,0
5	Jambi	1000	4.563.248,4	70,1	581.432,9
5	Jambi	0	4.749.171,0	71,0	612.919,5
5	Jambi	0	5.205.733,1	71,5	1.419.094,0
5	Jambi	650	5.205.733,1	71,5	1.419.094,0
5	Jambi	0	5.205.733,1	71,5	1.419.094,0
5	Jambi	0	5.205.733,1	71,5	1.419.094,0
6	Sumatera Selatan	3810	7.177.634,7	69,6	1.140.787,4
6	Sumatera Selatan	1600	7.177.634,7	69,6	1.140.787,4
6	Sumatera Selatan	445	7.346.694,9	70,2	1.133.746,8
6	Sumatera Selatan	0	7.601.631,7	71,1	1.580.361,5
6	Sumatera Selatan	204	7.872.096,0	71,4	2.302.940,0
6	Sumatera Selatan	0	7.872.096,0	71,4	2.302.940,0
6	Sumatera Selatan	200	7.872.096,0	71,4	2.302.940,0
6	Sumatera Selatan	0	8.155.245,4	72,1	2.743.383,0
6	Sumatera Selatan	0	8.155.245,4	72,1	2.743.383,0
7	Bengkulu	0	3.857.648,7	71,1	368.454,0
7	Bengkulu	0	4.335.352,6	71,6	699.101,0
7	Bengkulu	0	4.008.870,8	71,3	399.413,0

8	Lampung	300	3.824.761,9	69,9	340.116,1
8	Lampung	0	3.824.761,9	69,9	340.116,1
8	Lampung	46231	4.031.825,4	68,9	937.810,8
8	Lampung	0	4.169.834,3	69,4	1.002.755,7
8	Lampung	0	4.169.834,3	69,4	1.002.755,7
8	Lampung	0	4.169.834,3	69,4	1.002.755,7
8	Lampung	0	4.485.018,7	69,8	1.555.600,0
8	Lampung	0	4.485.018,7	69,8	1.555.600,0
8	Lampung	0	4.485.018,7	69,8	1.555.600,0
8	Lampung	0	4.656.228,9	70,3	1.738.310,0
8	Lampung	8054,45	4.656.228,9	70,3	1.738.310,0
8	Lampung	0	4.656.228,9	70,3	1.738.310,0
8	Lampung	66,079	4.656.228,9	70,3	1.738.310,0
8	Lampung	0	4.656.228,9	70,3	1.738.310,0
9	Bangka Belitung	0	8.552.036,8	71,6	825.741,0
9	Bangka Belitung	0	8.552.036,8	71,6	825.741,0
10	Kepulauan Riau	0	22.394.985,7	70,8	na
10	Kepulauan Riau	0	23.865.858,4	72,2	456.759,9
11	DKI Jakarta	0	31.920.420,6	75,8	11.493.273,3
11	DKI Jakarta	0	35.728.349,8	76,3	17.803.238,9
11	DKI Jakarta	0	35.728.349,8	76,3	17.803.238,9
11	DKI Jakarta	0	35.728.349,8	76,3	17.803.238,9
11	DKI Jakarta	0	35.728.349,8	76,3	17.803.238,9
11	DKI Jakarta	0	36.733.143,6	76,6	na
11	DKI Jakarta	0	36.733.143,6	76,6	na
11	DKI Jakarta	0	38.654.201,5	77,0	20.523.322,0
11	DKI Jakarta	0	38.654.201,5	77,0	20.523.322,0
12	Jawa Barat	128100	5.978.433,7	69,1	3.670.567,3
12	Jawa Barat	2000	5.978.433,7	69,1	3.670.567,3
12	Jawa Barat	5357,4	5.978.433,7	69,1	3.670.567,3
12	Jawa Barat	5666	5.978.433,7	69,1	3.670.567,3
12	Jawa Barat	0	6.217.158,9	69,9	4.131.439,8
12	Jawa Barat	2008	6.217.158,9	69,9	4.131.439,8
12	Jawa Barat	50000	6.217.158,9	69,9	4.131.439,8
12	Jawa Barat	700	6.217.158,9	69,9	4.131.439,8
12	Jawa Barat	0	6.477.859,4	70,3	4.858.772,0
12	Jawa Barat	0	6.477.859,4	70,3	4.858.772,0
12	Jawa Barat	21775	6.477.859,4	70,3	4.858.772,0
12	Jawa Barat	0	6.477.859,4	70,3	4.858.772,0
12	Jawa Barat	3946	6.477.859,4	70,3	4.858.772,0
12	Jawa Barat	992,419	6.477.859,4	70,3	4.858.772,0
12	Jawa Barat	0	6.477.859,4	70,3	4.858.772,0
12	Jawa Barat	220	6.798.572,4	70,7	5.272.060,0
12	Jawa Barat	0	6.798.572,4	70,7	5.272.060,0
12	Jawa Barat	1225,25	6.798.572,4	70,7	5.272.060,0

12	Jawa Barat	78054	6.798.572,4	70,7	5.272.060,0
12	Jawa Barat	413333,55	6.798.572,4	70,7	5.272.060,0
12	Jawa Barat	0	6.798.572,4	70,7	5.272.060,0
12	Jawa Barat	0	7.091.475,7	71,1	6.050.017,0
12	Jawa Barat	0	7.091.475,7	71,1	6.050.017,0
12	Jawa Barat	0	7.091.475,7	71,1	6.050.017,0
12	Jawa Barat	0	7.091.475,7	71,1	6.050.017,0
12	Jawa Barat	0	7.091.475,7	71,1	6.050.017,0
13	Jawa Tengah	4915	4.191.381,8	68,9	2.538.436,8
13	Jawa Tengah	0	4.191.381,8	68,9	2.538.436,8
13	Jawa Tengah	999,7	4.191.381,8	68,9	2.538.436,8
13	Jawa Tengah	1150,75	4.191.381,8	68,9	2.538.436,8
13	Jawa Tengah	0	4.191.381,8	68,9	2.538.436,8
13	Jawa Tengah	10767	4.486.164,2	69,8	2.682.191,6
13	Jawa Tengah	499	4.486.164,2	69,8	2.682.191,6
13	Jawa Tengah	635	4.486.164,2	69,8	2.682.191,6
13	Jawa Tengah	2044	4.486.164,2	69,8	2.682.191,6
13	Jawa Tengah	0	4.708.465,1	70,3	3.508.580,6
13	Jawa Tengah	0	4.708.465,1	70,3	3.508.580,6
13	Jawa Tengah	21	4.708.465,1	70,3	3.508.580,6
13	Jawa Tengah	0	4.708.465,1	70,3	3.508.580,6
13	Jawa Tengah	500	4.708.465,1	70,3	3.508.580,6
13	Jawa Tengah	162,35	4.708.465,1	70,3	3.508.580,6
13	Jawa Tengah	0	4.913.798,0	70,9	4.090.554,0
13	Jawa Tengah	8527,487	4.913.798,0	70,9	4.090.554,0
13	Jawa Tengah	439,15	4.913.798,0	70,9	4.090.554,0
13	Jawa Tengah	1002	4.913.798,0	70,9	4.090.554,0
13	Jawa Tengah	105	4.913.798,0	70,9	4.090.554,0
13	Jawa Tengah	11	5.142.779,2	71,6	5.394.313,0
13	Jawa Tengah	0	5.142.779,2	71,6	5.394.313,0
13	Jawa Tengah	256,6	5.142.779,2	71,6	5.394.313,0
13	Jawa Tengah	182,1	5.142.779,2	71,6	5.394.313,0
14	Yogyakarta	0	5.013.171,8	72,9	640.091,2
14	Yogyakarta	0	5.155.440,8	73,5	828.158,2
14	Yogyakarta	0	5.295.889,5	73,7	958.192,1
14	Yogyakarta	0	5.295.889,5	73,7	958.192,1
14	Yogyakarta	0	5.295.889,5	73,7	958.192,1
14	Yogyakarta	0	5.295.889,5	73,7	958.192,1
14	Yogyakarta	0	5.325.815,0	74,2	1.067.388,0
14	Yogyakarta	0	5.538.110,9	74,9	1.485.949,0
15	Jawa Timur	0	6.655.316,4	66,8	3.516.027,2
15	Jawa Timur	32207	6.655.316,4	66,8	3.516.027,2
15	Jawa Timur	4000	6.655.316,4	66,8	3.516.027,2
15	Jawa Timur	2000	6.655.316,4	66,8	3.516.027,2
15	Jawa Timur	891	6.655.316,4	66,8	3.516.027,2

15	Jawa Timur	3004	7.213.494,3	68,4	3.618.553,5
15	Jawa Timur	0	7.213.494,3	68,4	3.618.553,5
15	Jawa Timur	17500	7.213.494,3	68,4	3.618.553,5
15	Jawa Timur	0	7.213.494,3	68,4	3.618.553,5
15	Jawa Timur	80	7.599.084,4	69,2	4.780.246,2
15	Jawa Timur	0	7.599.084,4	69,2	4.780.246,2
15	Jawa Timur	9609	7.599.084,4	69,2	4.780.246,2
15	Jawa Timur	182278	7.599.084,4	69,2	4.780.246,2
15	Jawa Timur	1000	7.599.084,4	69,2	4.780.246,2
15	Jawa Timur	2700	7.599.084,4	69,2	4.780.246,2
15	Jawa Timur	0	7.800.772,6	69,8	5.046.445,0
15	Jawa Timur	2445,85	7.800.772,6	69,8	5.046.445,0
15	Jawa Timur	10347,5	7.800.772,6	69,8	5.046.445,0
15	Jawa Timur	150	7.800.772,6	69,8	5.046.445,0
15	Jawa Timur	4798,6	7.800.772,6	69,8	5.046.445,0
15	Jawa Timur	61	7.800.772,6	69,8	5.046.445,0
15	Jawa Timur	21147,974	8.216.757,2	70,4	6.111.296,0
15	Jawa Timur	0	8.216.757,2	70,4	6.111.296,0
15	Jawa Timur	271,75	8.216.757,2	70,4	6.111.296,0
15	Jawa Timur	2327,2	8.216.757,2	70,4	6.111.296,0
16	Banten	0	6.042.034,8	67,9	1.091.721,3
16	Banten	100	6.042.034,8	67,9	1.091.721,3
16	Banten	0	6.242.018,3	68,8	1.598.988,2
16	Banten	0	6.242.018,3	68,8	1.598.988,2
16	Banten	0	6.409.518,8	69,1	2.043.523,9
16	Banten	0	6.409.518,8	69,1	2.043.523,9
16	Banten	466839,505	6.902.686,5	69,3	1.927.221,0
16	Banten	0	6.902.686,5	69,3	1.927.221,0
16	Banten	134	6.902.686,5	69,3	1.927.221,0
16	Banten	15	6.902.686,5	69,3	1.927.221,0
16	Banten	0	7.168.066,8	69,7	2.154.355,0
16	Banten	0	7.168.066,8	69,7	2.154.355,0
16	Banten	0	7.168.066,8	69,7	2.154.355,0
17	Bali	27027	5.882.615,5	69,1	664.634,2
17	Bali	0	5.882.615,5	69,1	664.634,2
17	Bali	0	5.882.615,5	69,1	664.634,2
17	Bali	5200	5.882.615,5	69,1	664.634,2
17	Bali	0	6.237.219,1	69,8	844.205,1
17	Bali	0	6.481.820,6	70,1	1.233.861,9
17	Bali	0	6.481.820,6	70,1	1.233.861,9
17	Bali	0	6.481.820,6	70,1	1.233.861,9
17	Bali	0	6.752.413,1	70,5	1.257.200,0
17	Bali	0	6.752.413,1	70,5	1.257.200,0
17	Bali	555	6.752.413,1	70,5	1.257.200,0
17	Bali	0	6.752.413,1	70,5	1.257.200,0

17	Bali	0	7.082.073,9	71,0	1.502.295,0
17	Bali	0	7.082.073,9	71,0	1.502.295,0
17	Bali	0	7.082.073,9	71,0	1.502.295,0
18	Nusa Tenggara Barat	34555	3.662.457,0	60,6	423.327,7
18	Nusa Tenggara Barat	6361,8	3.662.457,0	60,6	423.327,7
18	Nusa Tenggara Barat	125	3.662.457,0	60,6	423.327,7
18	Nusa Tenggara Barat	0	3.662.457,0	60,6	423.327,7
18	Nusa Tenggara Barat	0	3.486.118,5	62,4	518.456,2
18	Nusa Tenggara Barat	0	3.486.118,5	62,4	518.456,2
18	Nusa Tenggara Barat	2165	3.527.073,9	63,0	750.192,1
18	Nusa Tenggara Barat	256800	3.527.073,9	63,0	750.192,1
18	Nusa Tenggara Barat	84635,7	3.527.073,9	63,0	750.192,1
18	Nusa Tenggara Barat	77259,75	3.527.073,9	63,0	750.192,1
18	Nusa Tenggara Barat	0	3.527.073,9	63,0	750.192,1
18	Nusa Tenggara Barat	0	3.813.446,8	63,7	868.221,0
18	Nusa Tenggara Barat	32030,965	3.813.446,8	63,7	868.221,0
18	Nusa Tenggara Barat	565	3.813.446,8	63,7	868.221,0
18	Nusa Tenggara Barat	0	3.849.816,6	64,1	1.093.767,0
18	Nusa Tenggara Barat	28,57855	3.849.816,6	64,1	1.093.767,0
18	Nusa Tenggara Barat	35	3.849.816,6	64,1	1.093.767,0
19	Nusa Tenggara Timur	0	2.304.091,4	62,7	389.541,9
19	Nusa Tenggara Timur	53138	2.304.091,4	62,7	389.541,9
19	Nusa Tenggara Timur	63413	2.304.091,4	62,7	389.541,9
19	Nusa Tenggara Timur	1170	2.304.091,4	62,7	389.541,9
19	Nusa Tenggara Timur	911	2.304.091,4	62,7	389.541,9
19	Nusa Tenggara Timur	273	2.304.091,4	62,7	389.541,9
19	Nusa Tenggara Timur	0	2.390.683,8	63,6	474.974,8
19	Nusa Tenggara Timur	0	2.477.421,6	64,8	673.034,1
19	Nusa Tenggara Timur	817	2.477.421,6	64,8	673.034,1
19	Nusa Tenggara Timur	0	2.477.421,6	64,8	673.034,1
19	Nusa Tenggara Timur	3455,9	2.477.421,6	64,8	673.034,1
19	Nusa Tenggara Timur	0	2.477.421,6	64,8	673.034,1
19	Nusa Tenggara Timur	4191,32	2.450.584,3	65,4	948.415,0
19	Nusa Tenggara Timur	2437	2.450.584,3	65,4	948.415,0
19	Nusa Tenggara Timur	75	2.450.584,3	65,4	948.415,0
19	Nusa Tenggara Timur	22,723	2.450.584,3	65,4	948.415,0
19	Nusa Tenggara Timur	0	2.450.584,3	65,4	948.415,0
19	Nusa Tenggara Timur	59902,812	2.519.997,6	66,2	1.052.621,0
19	Nusa Tenggara Timur	172,529	2.519.997,6	66,2	1.052.621,0
19	Nusa Tenggara Timur	59224,8925	2.519.997,6	66,2	1.052.621,0
19	Nusa Tenggara Timur	10173,8	2.519.997,6	66,2	1.052.621,0
20	Kalimantan Barat	0	5.606.317,6	65,4	na
20	Kalimantan Barat	0	5.606.317,6	65,4	na
20	Kalimantan Barat	0	5.356.564,3	66,2	688.959,2
20	Kalimantan Barat	0	5.356.564,3	66,2	688.959,2

20	Kalimantan Barat	0	6.284.706,9	67,5	1.081.137,0
20	Kalimantan Barat	4500	6.514.992,0	68,2	1.301.826,0
20	Kalimantan Barat	0	6.514.992,0	68,2	1.301.826,0
21	Kalimantan Tengah	0	6.759.682,4	73,4	329.250,6
21	Kalimantan Tengah	0	7.767.346,4	73,5	1.082.945,0
21	Kalimantan Tengah	0	8.129.837,3	73,9	1.371.219,0
22	Kalimantan Selatan	75000	6.886.790,1	66,7	585.332,1
22	Kalimantan Selatan	0	6.886.790,1	66,7	585.332,1
22	Kalimantan Selatan	0	7.188.835,1	67,4	775.118,6
22	Kalimantan Selatan	0	7.427.332,7	67,8	1.123.626,4
22	Kalimantan Selatan	0	7.427.332,7	67,8	1.123.626,4
22	Kalimantan Selatan	0	7.631.609,4	68,0	1.262.709,0
22	Kalimantan Selatan	0	7.631.609,4	68,0	1.262.709,0
22	Kalimantan Selatan	1000	7.990.034,1	68,7	1.378.948,0
22	Kalimantan Selatan	330	7.990.034,1	68,7	1.378.948,0
23	Kalimantan Timur	0	32.970.172,7	72,2	2.629.006,5
23	Kalimantan Timur	250	32.970.172,7	72,2	2.629.006,5
23	Kalimantan Timur	100	32.970.172,7	72,2	2.629.006,5
23	Kalimantan Timur	100000	33.419.190,3	72,9	na
23	Kalimantan Timur	483	33.419.190,3	72,9	na
23	Kalimantan Timur	0	33.419.190,3	72,9	na
23	Kalimantan Timur	0	33.478.703,3	73,3	4.086.625,9
23	Kalimantan Timur	130	33.478.703,3	73,3	4.086.625,9
23	Kalimantan Timur	0	33.419.190,3	72,9	na
23	Kalimantan Timur	0	32.540.512,8	73,8	4.113.195,0
23	Kalimantan Timur	0	32.540.512,8	73,8	4.113.195,0
23	Kalimantan Timur	120	32.540.512,8	73,8	4.113.195,0
23	Kalimantan Timur	0	33.337.002,6	74,5	6.109.317,0
23	Kalimantan Timur	0	33.337.002,6	74,5	6.109.317,0
23	Kalimantan Timur	0	33.337.002,6	74,5	6.109.317,0
24	Sulawesi Utara	0	5.639.913,3	73,4	407.432,5
24	Sulawesi Utara	0	5.639.913,3	73,4	407.432,5
24	Sulawesi Utara	0	5.950.114,3	74,2	425.971,8
24	Sulawesi Utara	0	6.210.525,4	74,4	644.867,5
24	Sulawesi Utara	89459	6.210.525,4	74,4	644.867,5
24	Sulawesi Utara	0	6.210.525,4	74,4	644.867,5
24	Sulawesi Utara	0	6.210.525,4	74,4	644.867,5
24	Sulawesi Utara	0	6.559.494,4	74,7	778.838,0
24	Sulawesi Utara	0	6.559.494,4	74,7	778.838,0
24	Sulawesi Utara	0	6.559.494,4	74,7	778.838,0
24	Sulawesi Utara	0	6.987.511,5	75,2	884.712,0
24	Sulawesi Utara	0	6.987.511,5	75,2	884.712,0
24	Sulawesi Utara	0	6.987.511,5	75,2	884.712,0
25	Sulawesi Tengah	0	4.866.143,2	67,3	417.136,7
25	Sulawesi Tengah	0	4.866.143,2	67,3	417.136,7

25	Sulawesi Tengah	0	4.866.143,2	67,3	417.136,7
25	Sulawesi Tengah	0	4.888.617,2	68,5	421.970,7
25	Sulawesi Tengah	0	4.888.617,2	68,5	421.970,7
25	Sulawesi Tengah	0	5.171.427,5	68,9	na
25	Sulawesi Tengah	97528,255	5.710.659,6	69,3	695.859,0
25	Sulawesi Tengah	0	5.710.659,6	69,3	695.859,0
25	Sulawesi Tengah	0	5.710.659,6	69,3	695.859,0
25	Sulawesi Tengah	0	6.047.417,0	70,1	967.443,0
25	Sulawesi Tengah	0	6.047.417,0	70,1	967.443,0
25	Sulawesi Tengah	0	6.047.417,0	70,1	967.443,0
25	Sulawesi Tengah	0	6.047.417,0	70,1	967.443,0
25	Sulawesi Tengah	0	6.047.417,0	70,1	967.443,0
25	Sulawesi Tengah	0	6.047.417,0	70,1	967.443,0
26	Sulawesi Selatan	0	4.117.078,5	67,8	938.635,6
26	Sulawesi Selatan	22790	4.117.078,5	67,8	938.635,6
26	Sulawesi Selatan	1250	4.117.078,5	67,8	938.635,6
26	Sulawesi Selatan	6921	4.288.094,4	68,1	1.125.546,6
26	Sulawesi Selatan	100	4.288.094,4	68,1	1.125.546,6
26	Sulawesi Selatan	825	4.515.454,7	68,8	1.364.615,8
26	Sulawesi Selatan	546	4.515.454,7	68,8	1.364.615,8
26	Sulawesi Selatan	0	4.515.454,7	68,8	1.364.615,8
26	Sulawesi Selatan	3822,5	4.515.454,7	68,8	1.364.615,8
26	Sulawesi Selatan	0	4.515.454,7	68,8	1.364.615,8
26	Sulawesi Selatan	0	5.367.638,4	69,6	1.718.116,0
26	Sulawesi Selatan	0	5.367.638,4	69,6	1.718.116,0
26	Sulawesi Selatan	2406,5	5.367.638,4	69,6	1.718.116,0
26	Sulawesi Selatan	0	5.367.638,4	69,6	1.718.116,0
26	Sulawesi Selatan	10600	5.707.857,1	70,2	1.979.220,0
26	Sulawesi Selatan	0	5.707.857,1	70,2	1.979.220,0
26	Sulawesi Selatan	19,8	5.707.857,1	70,2	1.979.220,0
27	Sulawesi Tenggara	0	3.848.150,1	67,5	414.505,2
27	Sulawesi Tenggara	0	4.036.487,2	67,8	587.902,9
27	Sulawesi Tenggara	0	4.036.487,2	67,8	587.902,9
27	Sulawesi Tenggara	1000	4.824.379,0	69,0	883.699,0
28	Gorontalo	1200	2.111.342,9	65,4	238.928,5
28	Gorontalo	0	2.324.837,0	67,5	131.694,8
28	Gorontalo	0	2.475.330,1	68,0	149.300,6
28	Gorontalo	0	2.475.330,1	68,0	149.300,6
28	Gorontalo	0	2.435.923,7	68,8	449.066,0
28	Gorontalo	0	2.435.923,7	68,8	449.066,0
28	Gorontalo	0	2.435.923,7	68,8	449.066,0
28	Gorontalo	0	2.592.751,9	69,3	527.504,0
28	Gorontalo	0	2.592.751,9	69,3	527.504,0
28	Gorontalo	0	2.592.751,9	69,3	527.504,0
29	Sulawesi Barat	0	3.509.212,3	67,7	356.661,0
29	Sulawesi Barat	545	3.509.212,3	67,7	356.661,0

29	Sulawesi Barat	0	3.751.354,1	68,6	575.932,0
30	Maluku	0	2.670.896,0	69,7	569.219,9
30	Maluku	0	2.670.896,0	69,7	569.219,9
30	Maluku	0	2.867.497,5	70,4	800.488,0
30	Maluku	0	2.867.497,5	70,4	800.488,0
30	Maluku	0	2.867.497,5	70,4	800.488,0
30	Maluku	0	2.867.497,5	70,4	800.488,0
31	Maluku Utara	0	2.448.467,8	66,4	na
31	Maluku Utara	0	2.512.697,9	67,0	281.037,4
31	Maluku Utara	0	2.605.436,2	67,5	440.396,5
31	Maluku Utara	0	2.605.436,2	67,5	440.396,5
31	Maluku Utara	0	2.648.708,2	67,8	516.707,0
31	Maluku Utara	0	2.648.708,2	67,8	516.707,0
31	Maluku Utara	0	2.648.708,2	67,8	516.707,0
32	Papua Barat	0	2.762.359,4	68,2	636.473,0
33	Papua	360000	6.507.200,4	60,9	2.363.886,3
33	Papua	15060	6.507.200,4	60,9	2.363.886,3
33	Papua	0	8.818.770,9	62,1	na
33	Papua	0	7.136.230,4	62,8	na
33	Papua	0	7.136.230,4	62,8	na
33	Papua	0	7.136.230,4	62,8	na
33	Papua	0	7.136.230,4	62,8	na
33	Papua	0	9.197.606,3	64,0	5.448.791,0
33	Papua	0	9.197.606,3	64,0	5.448.791,0
33	Papua	0	9.197.606,3	64,0	5.448.791,0