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THE EFFECT OF VILLAGE FUNDS ALLOCATION ON POVERTY IN INDONESIA

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Abstract

The allocation of village funds are needed because of the decentralization and delegation of authority of village autonomy is to provide public services and the implementation of village governance in accordance with regulations-regulations applicable. This allocation is expected to improve development and socio-economic progress of society include poverty. The purpose of this study is to examine the effect of the allocation of village funds on the level of poverty. The variables used are village funds allocation and the number of poor peoples. Data used time-series and cross-sectional data from all districts and cities in Indonesia during the period 2012 to 2015. Used purposive sampling, this research samples is 409 districts and cities from total 516 districts and cities in Indonesia. The statistical method used is quantitative. Chow test, Hausman test, and Lagrange multiplier test in this study showed that fixed effect is the best models in regression. The data used in this research is processed using Eviews 9 to get the result of linear regressions. The result showed that village funds allocation has an effect on poverty but the effect insignificant.

IndexTerms—Decentralization, village funds, village, district, poverty

I. INTRODUCTION

According to Faguet (2000), decentralization is giving certain function performed by central government in all sectors including administration, politics, and economy required by the

independent local government within the scope of legal functional and geographical. Based on the Law No. 12 of 2008 concerning the amendments of Law No. 32 Year 2004 on Regional Government article 1, paragraph 7, and Law No. 33 of 2004 on Financial Balance between Central and Local Government article 1, paragraph 8, "Decentralization is giving authority performed by the central government to autonomous regions to organize and manage the system of government in the Republic of Indonesia". One of the important aspects in the decentralization is the issue of fiscal decentralization.

Liu (2007) and Syahrudin (2006) have proved that fiscal decentralization provides economic benefits for countries such as the improvement of growth rate, effectiveness, and efficiency of resource management and public participation in decision-making (Liu, 2007). Therefore, fiscal decentralization is a core component of decentralization because sufficient financial resources are required to run the necessary authority that has been transferred (Moisiu, 2013). Although there are several ways to describe the process of fiscal decentralization, its essence lies in two related processes both fiscal representation and delegation of authority (Martinez-Vazquez and McNab, 2001).

Governments overcome the problems arising from the fiscal decentralization by issuing Law No. 25 Year 1999 on Financial Balance between the Central Government and Local Government. Fund balance consists of General Allocation Fund, Special Allocation Fund, and revenue-sharing funds (DBH). Balance Funds received by the District is allocated to the village for 10% after being reduced by Special Allocation Fund. According to the Indonesian Government Regulation No. 72 Year 2005 on the village, the village fund allocation is part of the financial balance of central and local received by the districts/cities to the village at least 10% (ten percent), which is distributed to village proportionally. Based on decree of the Minister of Home Affairs Number 37 Year 2007 regarding Guidelines for Financial Management of Rural, the allocation of village funds derives from the budget of the district/city sourced from the financial balance of central and local received by the district/city to the village at least 10% (ten percent).

The targets of the village fund allocation are the whole village within the district/city. 30% of the village funds is allocated to support the implementation of village governance and strengthening the institutional role of rural communities, and 70% is allocated to support the empowerment of rural communities. The village fund allocation is expected to improve the welfare of the community in the forms of education, health, economics, and so on.

Many indicators are used by previous researchers to measure the improvements in the field of education, health and economic of the society. They include human development index, Gini index, and poverty index. The research on the effects of the Economy Village Allocation Fund has been done by Prasetyanto (2012). His research has found that village Fund Allocation is able to improve fiscal performance and the regional economy, reduce the number of poor people and increase the gross regional domestic product of agricultural sector. Moreover, research conducted Suwandi (2013) which utilizes path analysis had found that there is an effect of fiscal decentralization on poverty reduction in Papua.

Based on the explanation above, this study will examine the effect of village funds allocation on poverty.

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II. LITERATURE REVIEW

Village Funds

According to the Indonesian Government Regulation No. 72 Year 2005 on the village, the village fund allocation is part of the financial balance of central and local received by the regencies/ cities to the village at least 10% (ten percent), which is distributed to village proportionally. Based on decree of the Minister of Home Affairs Number 37 Year 2007 regarding Guidelines for Financial Management of Rural, the allocation of village funds derives from the budget of the district / city sourced from the financial balance of central and local received by the district / city to the village at least 10% (ten percent). Village Fund Allocation (ADD) According to Law No. 6 of 2014 On The village is part of the balance of funds received by the district/city at least 10% (ten percent) in the budget revenue and expenditure net of special allocation funds.

Poverty

Poverty is the abilities or resources which have by households or individuals today to meet their needs (Coudouel et al., 2002). World Bank (World Bank, 2008) categorizes poverty into extreme poverty which is living less than US$ 1.25 per day and moderate poverty which is living less than US$ 2 per day. While, according to Indonesian Statistic Center, poverty defined as lack of economic ability to fulfill basic needs. So, poor people is the people who have an average of monthly expenses below the poverty line (Statistics Indonesia, 2015). Poverty can be divided into two categories based on the characteristics, such as absolute poverty and relative poverty (Todaro, 2012). While Sachs (2005) divided poverty into 3 classifications, such as extreme (absolute), moderate and relative.

Indonesia Statistic Center measured the poverty based on the basic needs approach. With this approach, poverty is seen as an economic inability to meet the basic needs of food and non-food which is measured from the expenditure side. So the Poor is the population had an average monthly per capita expenditure below the poverty line. Food poverty line is the value of basic food consumption expenditure is equivalent to 2.100 kcal energy per capita per day. The non-food poverty line is the amount of money to meets the minimum needs of nonfood items such as education, health, transportation, etc.

Previous Study

A number of previous studies underlying this research are described as shown in table 1:

TABLE I. PREVIOUS STUDIES

No	Researcher	Year	Variables Studied	Results
1	Suwandi	2013	Regional Owned-Source of Revenue (PAD), Specific Allocation Fund (DAK), General Allocation Fund (DAU), Tax- and Non-Tax-Based on Revenue Sharing Funds, Gross Domestic Regional Product, Employment Index, Poverty Index, Human Development Index, and Special Autonomy Fund	Fiscal decentralization has an effect of reducing poverty in Papua.

No	Researcher	Year	Variables Studied	Results
2	Prasetyanto	2012	ADD, GDP, Poverty	ADD able to improve fiscal performance and the regional economy, able to reduce poverty and increase the regional gross domestic product of agriculture sector.
3	Hong	2010	Fiscal Policy, Debt, GDP	fiscal policy has an important role both in economic growth and to reduce poverty at the national level.
4	Sari, Dini Gemala	2010	Village funds allocation, Village development	there is a significant relationship between the village allocation fund with village development in Stabat, Langkat district and there is a positive public perception of the benefits of the use of Village Allocation Fund with village development in Stabat, Langkat.

III. RESEARCH METHOD

The population observed in this study are all districts and cities in Indonesia. This study used purposive sampling method (Ghozali, 2012), with selected samples have a complete data of the allocation of village funds (ADD) and the number of poor peoples (JPM) during the period 2012 to 2015.

The data source of this research is secondary data. This study uses panel data (combination of cross section data and time series). Softcopy of village funds allocation and the number of poor people or poverty data obtained from the official website of the Central Bureau of Statistics (www.bps.go.id). In Indonesia total district and cities is 512, and samples of this research that have complete data during period 2012 to 2015 are 409 districts and cities as shown in appendix 1. Methods of data analysis performed in this study are as follows: estimation regression models of panel data, determine the best regression models, assumption test, and hypothesis test. The data used in this research is processed using Eviews 9 to get the result of linear regressions.

Estimation Regressions Models

There are several methods used in estimating the regression models with panel data (Widarjono, 2009):

a. Pooling least square (common effect models)

According to Widarjono (2009), this model is the simplest models to estimate the panel data. Common effect regresses the data by combining time series and cross-section data by using

the OLS method (estimated common effect). This approach does not pay attention to individual dimensions and time. In this models, it is assumed that the inter-individual behavioral data same with time. A disadvantage of this method is the difference between individuals and across time cannot be detected.

The equation for common effect models according to Gujarati (2012):

$$Y_{it} = \alpha + \beta^1 X_{it} + E_{it} \qquad (1)$$

where i indicates the number of subjects (cross-section) and t indicates a period of time (time series).

b. Fixed effect models

Fixed effect models are models with different intercept for each subject (cross-section), but the slope of each subject does not change over time (Gujarati, 2012). This model assumes that the intercept is different every subject while the slope remains the same between subjects. Dummy variables are used to distinguish the subjects (Kuncoro, 2012). This model is often called a model Least Square Dummy Variables (LSDV). The equation for fixed effect models according to Gujarati (2012):

$$Y_{it} = \alpha_i + \beta^1 X_{it} + E_{it} \qquad (2)$$

where i indicates the number of subjects (cross section), t indicates a period of time (time series), and E_{it} indicates overall residual which is a combination of cross section and time series residual.

c. Random effect models

Random effect models estimate the residual variable panel data suspected of having links across time and between subjects. Random effect models used to overcome the disadvantages of the fixed effect model that uses a dummy variable (Widarjono, 2009). The equation for random effect models according to Gujarati (2012):

$$Y_{it} = \alpha + \beta^1 X_{it} + U_i + E_{it} \qquad (3)$$

where i indicates the number of subjects (cross section), t indicates a period of time (time series), U_i indicates individually residual which is i^{th} random characteristic from unit observation and fixed all the time, and E_{it} indicates overall residual which is a combination of cross section and time series residual.

Determine The Best Regressions Models

Three estimation techniques used to determine the best regressions models. Three techniques used are:

a. Chow test

Chow test is a test to compares the common effect and fixed effect models (Widarjono, 2009). Hypothesis formed in this test is:

H_0: Common effect models is used

H_1: Fixed effect models is used

H_0 rejected if value of Cross-section Chi-square < α. H_0 accepted if probability value of Cross-section Chi-square > α. The value of α used 0.05.

b. Hausman test

Hausman test compares fixed effect model to random effect models in determining the best regressions models of panel data (Gujarati, 2012). Hypothesis formed in this test is:

H_0: Random effect models is used

H_1: Fixed effect models is used

H_0 rejected if probability value of Cross-section Random < α. H_0 accepted if probability value of Cross-section Random < α. The value of α used 0.05.

c. Lagrange Multiplier test (LM test)

LM test compares common effect models to random effect models in determining the best regressions models of panel data. Hypothesis formed in this test is:

H_0: Common effect models is used

H_1: Random effect models is used

H_0 rejected if probability value of Breusch-Pagan < α. H_0 accepted if probability value of Breusch-Pagan < α. The value of α used 0.05.

Classical assumptions test

Panel data is a regression that employs both time series and cross-sectional data (Widarjono, 2009). According Baltagi (1995; pp. 4-7), the advantages of using panel data in regression analysis: overcoming the problem of individual heterogeneity, provide more informative data, reducing the variable collinearity problem, resolve the problem of omitted variable, produce a degree of freedom greater, studying dynamics of adjustment, can identify and quantify the effect which can not be done by the analysis of pure time series or cross-section, can reduce bias in the estimation because quite a lot of data. According to Gujarati (2012), the multicollinearity problem is less severe in panel data methods. Based on the description above, classical assumptions used in the study is the autocorrelation and heteroskedasticity test.

Hypothesis test

A test statistic is a standardized value that is calculated from sample data during a hypothesis test. This test used to determine whether to reject the null hypothesis, compares the data with

the null hypothesis that we expected, and used to calculate the p-value. When the data show strong evidence against the assumptions in the null hypothesis, the magnitude of the test statistic becomes large and the test's p-value can become small enough to reject the null hypothesis.
This study used t tests to determine whether to reject or accept the null hypothesis. The hypothesis is shown as below:

H_0: village funds allocation have an effect on poverty
H_1: village funds allocation have not an effect on poverty

IV. RESULTS AND DISCUSSION

Regression models of panel data can be done by pooling least square (common effect models), fixed effect models, and random effect models. The best models determine with Chow test, Hausman test, and Lagrange Multiplier test as shown in table 2.

TABLE II. THE BEST REGRESSIONS MODELS

No	Test Name	Hypothesis	Test Results	Conclusions
1	Chow	H_0: Common Effect Models H_1: Fixed Effect Models H_0 Rejected if probability value of Cross-section Chi-square < 0.05	The probability value of Cross-section Chi-square is 0.0000 (<0.05)	Fixed Effect Models is used
2	Hausman	H_0: Random Effect Models H_1: Fixed Effect Models H_0 Rejected if probability value of Cross-section Random < 0.05	The probability value of Cross-section Random is 0.0000 (<0.05)	Fixed Effect Models is used
3	Lagrange Multiplier	H_0: Common Effect Models H_1: Random Effect Models H_0 Rejected if probability value of Breusch-Pagan < 0.05	The probability value of Breusch-Pagan is 0.0000 (<0.05)	Random Effect Models is used

Results of Chow test showed that the probability value of Cross-section Chi-square is 0.0000 or < 0.05, it means Fixed Effect Models is better than Common Effect Models. Results of Hausman test showed that the probability value of Cross-section Random is 0.0000 or < 0.05, it means Fixed Effect Models is better than Random Effect Models. Results of Lagrange Multiplier test showed that the probability value of Breusch-Pagan is 0.0000 or < 0.05, it means Random Effect Models is

better than Common Effect Models. According to the results of Chow test, Hausman test, and Lagrange Multiplier test, the best regression models to used is Fixed Effect Models.
Classical assumption test used in this panel data analysis is autocorrelation with Durbin-Watson test (DW test) and heteroskedasticity with the glejser test. The results of classical assumption test shown in table 3.

TABLE III. THE BEST REGRESSIONS MODELS

No	Test Name	Hypothesis	Test Results	Conclusions
1	Autocorrelation Sample: 409 Variable: 2 dL table: 1.83301 dU table: 1.84279 d stats : 1.874915 4 – dL : 2.15599	d < dL : positive autocorrelation d > (4 – dL) : negative correlation dU < d < (4 – dL) : no autocorrelation dL < d < dU or (4 – dU) : undefined	dU < d < (4 – dL): 1.84279 < 1.874915 < 2.15599	Not found autocorrelation
2	Heteroskedasticity with Glejser test	H_0 : homoskedasticity H_1 : heteroskedasticity H_0 Rejected if probability value of ADD variable <0.05	probability value of ADDvariable is 0.5730 (α>0.05)	Homoskedasticity

Results of DW test above showed that the value of d statistic (1.874915) is greater than dU table value (1.84279) and smaller than 4 – dL table value (2.15599). It means that the panel data free from autocorrelation problem. Statistic output of the autocorrelation test shown in appendix 8.

Appendix 8. Eviews Output (insert here)

Results of the glejser test above showed that the probability value of ADD variable (0.5730) is greater than α (0.05). it means that the ADD variable has homoskedasticity. Statistic output of the heteroskedasticity test shown in appendix 9.

Appendix 9. Eviews Output (insert here)

According to appendix 3, the results of partial regression test (t-test) showed that the t value is -0.459360 and the level of significant are 0.6461 (> 0.05), it means that Village funds allocation (ADD) have a negative effect on the level of poverty (JPM) and the effect insignificant. This study has the same result from the previous study in table 1 that ADD can reduce poverty.

Appendix 3. Eviews Output (insert here)

V. CONCLUSION, SUGGESTION, AND RECOMMENDATION

This study has the same result from the previous study that village funds allocation have a negative effect on the level of poverty. The increases of village allocation funds will reduce the level of poverty though insignificant. At last, the suggestion and recommendation for the next research are: more variables are used in the next research according to explain about poverty, and village funds allocation management should be investigated first so the effect of village allocation funds has the best result.

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APPENDIXES

Appendix 1. Sample data

No	District/City
1	Kab. Simeulue
2	Kab. Aceh Singkil
3	Kab. Aceh Selatan
4	Kab. Aceh Tenggara
5	Kab. Aceh Timur
6	Kab. Aceh Tengah
7	Kab. Aceh Barat
8	Kab. Aceh Besar
9	Kab. Pidie
10	Kab. Bireuen
11	Kab. Aceh Utara
12	Kab. Aceh Barat Daya
13	Kab. Gayo Lues
14	Kab. Aceh Tamiang
15	Kab. Nagan Raya
16	Kab. Aceh Jaya
17	Kab. Bener Meriah
18	Kab. Pidie Jaya
19	Kota Banda Aceh
20	Kota Langsa
21	Kota Lhokseumawe
22	Kota Subulussalam
23	Kab. N i a s
24	Kab. Mandailing Natal
25	Kab. Tapanuli Selatan
26	Kab. Tapanuli Tengah
27	Kab. Tapanuli Utara

No	District/City
44	Kab. LabuhanBatu Selatan
45	Kab. LabuhanBatu Utara
46	Kab. Nias Utara
47	Kab. Nias Barat
48	Kota Padang Sidempuan
49	Kab. Kep. Mentawai
50	Kab. Pesisir Selatan
51	Kab. Solok
52	Kab. Sawahlunto/Sijunjung
53	Kab. Tanah Datar
54	Kab. Padang Pariaman
55	Kab. A g a m
56	Kab. Lima Puluh Koto
57	Kab. Pasaman
58	Kab. Solok Selatan
59	Kab. Dharmasraya
60	Kab. Pasaman Barat
61	Kota Sawahlunto
62	Kota Pariaman
63	Kab. Kuantan Senggigi
64	Kab. Indragiri Hulu
65	Kab. Indragiri Hilir
66	Kab. Pelalawan
67	Kab. S i a k
68	Kab. Kampar
69	Kab. Rokan Hulu
70	Kab. Bengkalis

No	District/City
87	Kab. MusiBanyuasin
88	Kab. Banyuasin
89	Kab. OKU Selatan
90	Kab. OKU Timur
91	Kab. OganIlir
92	Kab. EmpatLawang
93	Kota Prabumulih
94	Kab. Bengkulu Selatan
95	Kab. RejangLebong
96	Kab. Bengkulu Utara
97	Kab. K a u r
98	Kab. Seluma
99	Kab. MukoMuko
100	Kab. Lebong
101	Kab. Kepahiang
102	Bengkulu Tengah
103	Kab. Lampung Barat
104	Kab. Tanggamus
105	Kab. Lampung Selatan
106	Kab. Lampung Timur
107	Kab. Lampung Tengah
108	Kab. Lampung Utara
109	Kab. Way Kanan
110	Kab. TulangBawang
111	Kab. Pesawaran
112	Kab. Pringsewu
113	Kab. Mesuji

28	Kab. Toba Samosir
29	Kab. Labuhan Batu
30	Kab. Asahan
31	Kab. Simalungun
32	Kab. Dairi
33	Kab. K a r o
34	Kab. Deli Serdang
35	Kab. Langkat
36	Kab. Nias Selatan
37	Kab. Humbang Hasundutan
38	Kab. Pakpak Bharat
39	Kab. Samosir
40	Kab. Serdang Bedagai
41	Kab. Batu Bara
42	Kab. Padang Lawas Utara
43	Kab. Padang Lawas

71	Kab. Rokan Hilir
72	Kab. Kepulauan Meranti
73	Kab. Kerinci
74	Kab. Merangin
75	Kab. Sarolangun
76	Kab. Batang Hari
77	Kab. Muaro Jambi
78	Kab. Tjg Jabung Timur
79	Kab. Tjg Jabung Barat
80	Kab. T e b o
81	Kab. Bungo
82	Kota Sungai Penuh
83	Kab. Ogan Komering Ulu
84	Kab. Muara Enim
85	Kab. Lahat
86	Kab. Musi Rawas

114	Kab. Tulangbawang Barat
115	Kab. Bangka
116	Kab. Belitung
117	Kab. Bangka Barat
118	Kab. Bangka Tengah
119	Kab. Bangka Selatan
120	Kab. Belitung Timur
121	Kab. Karimun
122	Kab. Bintan
123	Kab. Natuna
124	Kab. Lingga
125	Kab. KepulauanAnambas
126	Kab. Bogor
127	Kab. Sukabumi
128	Kab. Cianjur
129	Kab. Bandung

No	District/City
130	Kab. Garut
131	Kab. Tasikmalaya
132	Kab. Ciamis
133	Kab. Kuningan
134	Kab. Cirebon
135	Kab. Majalengka
136	Kab. Sumedang
137	Kab. Indramayu
138	Kab. Subang
139	Kab. Purwakarta
140	Kab. Karawang
141	Kab. Bekasi
142	Kab. Bandung Barat
143	Kota Banjar
144	Kab. Cilacap
145	Kab. Banyumas
146	Kab. Purbalingga
147	Kab. Banjarnegara
148	Kab. Kebumen
149	Kab. Purworejo
150	Kab. Wonosobo
151	Kab. Magelang

No	District/City
175	Kab. Gunung Kidul
176	Kab. Sleman
177	Kab. Pacitan
178	Kab. Ponorogo
179	Kab. Trenggalek
180	Kab. Tulungagung
181	Kab. Blitar
182	Kab. Kediri
183	Kab. Malang
184	Kab. Lumajang
185	Kab. Jember
186	Kab. Banyuwangi
187	Kab. Bondowoso
188	Kab. Situbondo
189	Kab. Probolinggo
190	Kab. Pasuruan
191	Kab. Sidoarjo
192	Kab. Mojokerto
193	Kab. Jombang
194	Kab. Nganjuk
195	Kab. Madiun
196	Kab. Magetan

No	District/City
220	Kab. Lombok Barat
221	Kab. Lombok Tengah
222	Kab. Lombok Timur
223	Kab. Sumbawa
224	Kab. Dompu
225	Kab. B i m a
226	Kab. Sumbawa Barat
227	Kab. Lombok Utara
228	Kab. Sumba Barat
229	Kab. Sumba Timur
230	Kab. Kupang
231	Kab. Timor Tengah Selatan
232	Kab. Timor Tengah Utara
233	Kab. B e l u
234	Kab. A l o r
235	Kab. Lembata
236	Kab. Flores Timur
237	Kab. Sikka
238	Kab. E n d e
239	Kab. Ngada
240	Kab. Manggarai
241	Kab. Rote Ndao

152	Kab. Boyolali
153	Kab. Klaten
154	Kab. Sukoharjo
155	Kab. Wonogiri
156	Kab. Karanganyar
157	Kab. Sragen
158	Kab. Grobogan
159	Kab. Blora
160	Kab. Rembang
161	Kab. P a t i
162	Kab. Kudus
163	Kab. Jepara
164	Kab. Demak
165	Kab. Semarang
166	Kab. Temanggung
167	Kab. Kendal
168	Kab. Batang
169	Kab. Pekalongan
170	Kab. Pemalang
171	Kab. Tegal
172	Kab. Brebes
173	Kab. Kulon Progo
174	Kab. Bantul
No	**District/City**
265	Kab. Sukamara
266	Kab. Lamandau
267	Kab. Seruyan
268	Kab. Katingan
269	Kab. PulangPisau
270	Kab. Gunung Mas
271	Kab. Barito Timur
272	Kab. Murung Raya
273	Kab. Tanah Laut
274	Kab. Kota Baru
275	Kab. Banjar
276	Kab. Barito Kuala
277	Kab. Tapin
278	Kab. Hulu Sungai Selatan
279	Kab. Hulu Sungai Tengah
280	Kab. Hulu Sungai Utara

197	Kab. Ngawi
198	Kab. Bojonegoro
199	Kab. Tuban
200	Kab. Lamongan
201	Kab. Gresik
202	Kab. Bangkalan
203	Kab. Sampang
204	Kab. Pamekasan
205	Kab. Sumenep
206	Kota Batu
207	Kab. Pandeglang
208	Kab. Lebak
209	Kab. Tangerang
210	Kab. Serang
211	Kab. Jembrana
212	Kab. Tabanan
213	Kab. Badung
214	Kab. Gianyar
215	Kab. Klungkung
216	Kab. Bangli
217	Kab. KarangAsem
218	Kab. Buleleng
219	Kota Denpasar
No	**District/City**
309	Kab. P o s o
310	Kab. Donggala
311	Kab. ToliToli
312	Kab. B u o l
313	Kab. ParigiMoutong
314	Kab. Tojo Una-Una
315	Kab. Sigi
316	Kab. Selayar
317	Kab. Bulukumba
318	Kab. Bantaeng
319	Kab. Jeneponto
320	Kab. Takalar
321	Kab. G o w a
322	Kab. Sinjai
323	Kab. Maros
324	Kab.

242	Kab. Manggarai Barat
243	Kab. Sumba Tengah
244	Kab. Sumba Barat Daya
245	Kab. Nagekeo
246	Kab. ManggaraiTimur
247	Kab. SabuRaijua
248	Kab. Sambas
249	Kab. Bengkayang
250	Kab. Landak
251	Kab. Pontianak
252	Kab. Sanggau
253	Kab. Ketapang
254	Kab. Sintang
255	Kab. Kapuas Hulu
256	Kab. Sekadau
257	Kab. Melawi
258	Kab. Kayong Utara
259	Kab. Kubu Raya
260	Kab. Kotawaringin Barat
261	Kab. KotawaringinTimur
262	Kab. Kapuas
263	Kab. Barito Selatan
264	Kab. Barito Utara
No	**District/City**
353	Kab. PolewaliMandar
354	Kab. Mamasa
355	Kab. Mamuju
356	Kab. Mamuju Utara
357	Kab. Maluku Tenggara Barat
358	Kab. Maluku Tenggara
359	Kab. Maluku Tengah
360	Kab. B u r u
361	Kab. Kepulauan Aru
362	Kab. SeramBagian Barat
363	Kab. SeramBagianTimur
364	Kab. Maluku Barat Daya
365	Kab. Buru Selatan
366	Kota Ambon
367	Kota Tual
368	Kab. Halmahera Barat

281	Kab. Tabalong
282	Kab. Tanah Bumbu
283	Kab. Balangan
284	Kab. Pasir
285	Kab. Kutai Barat
286	Kab. Kutai
287	Kab. KutaiTimur
288	Kab. Berau
289	Kab. Malinau
290	Kab. Bulungan
291	Kab. Nunukan
292	Kab. PenajamPaser Utara
293	Kab. Tana Tidung
294	Kab. BolaangMongondow
295	Kab. Minahasa
296	Kab. Kep. Sangihe Talaud
297	Kab. Kep. Talaud
298	Kab. Minahasa Selatan
299	Kab. Minahasa Utara
300	Kab. BolaangMongondow Utara
301	Kab. Kep. Sitaro
302	Kab. Minahasa Tenggara
303	Kab. BolaangMongondow Selatan
304	Kab. BolaangMongondowTimur
305	Kota Kotamobagu
306	Kab. BanggaiKepulauan
307	Kab. Banggai
308	Kab. Morowali
No	**District/City**
397	Kab. Asmat
398	Kab. Yahukimo
399	Kab. PegununganBintang
400	Kab. Tolikara
401	Kab. Sarmi

	PangkajeneKepulauan
325	Kab. Barru
326	Kab. B o n e
327	Kab. Soppeng
328	Kab. W a j o
329	Kab. SidenrengRappang
330	Kab. Pinrang
331	Kab. Enrekang
332	Kab. L u w u
333	Kab. Tana Toraja
334	Kab. Luwu Utara
335	Kab. LuwuTimur
336	Kab. Toraja Utara
337	Kab. Buton
338	Kab. M u n a
339	Kab. Konawe
340	Kab. Kolaka
341	Kab. Konawe Selatan
342	Kab. Bombana
343	Kab. Wakatobi
344	Kab. Kolaka Utara
345	Kab. Buton Utara
346	Kab. Konawe Utara
347	Kab. Boalemo
348	Kab. Gorontalo
349	Kab. Pohuwato
350	Kab. Bone Bolango
351	Kab. Gorontalo Utara
352	Kab. Majene
No	**District/City**
402	Kab. Keerom
403	Kab. Waropen
404	Kab. Supiori
405	Kab. Mamberamo Raya
406	Kab. Lanny Jaya

369	Kab. Halmahera Tengah
370	Kab. Kepulauan Sula
371	Kab. Halmahera Selatan
372	Kab. Halmahera Utara
373	Kab. Halmahera Timur
374	Kab. PulauMorotai
375	Kota TidoreKepulauan
376	Kab. Fakfak
377	Kab. Kaimana
378	Kab. TelukWondama
379	Kab. TelukBintuni
380	Kab. Manokwari
381	Kab. Sorong Selatan
382	Kab. Sorong
383	Kab. Raja Ampat
384	Kab. Tambrauw
385	Kab. Maybrat
386	Kab. Merauke
387	Kab. Jayawijaya
388	Kab. Jayapura
389	Kab. Nabire
390	Kab. YapenWaropen
391	Kab. Biak Numfor
392	Kab. Paniai
393	Kab. Puncak Jaya
394	Kab. Mimika
395	Kab. BovenDigoel
396	Kab. Mappi
No	**District/City**
407	Kab. Yalimo
408	Kab. Dogiyai
409	Kota Jayapura

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Appendix 2. **EviewsOutput**: **CommonModelsEffect**

Dependent Variable: JPM?
Method: Pooled Least Squares
Date: 04/10/17 Time: 23:41
Sample: 2012 2015
Included observations: 4
Cross-sections included: 409
Total pool (balanced) observations: 1636

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ADD?	1.23E-06	5.29E-08	23.24233	0.0000

R-squared	-0.340652	Mean dependent var	60.67207
Adjusted R-squared	-0.340652	S.D. dependent var	68.56034
S.E. of regression	79.38364	Akaike info criterion	11.58707
Sum squared resid	10303381	Schwarz criterion	11.59037
Log likelihood	-9477.225	Hannan-Quinn criter.	11.58830
Durbin-Watson stat	0.065990		

Appendix 3. Eviews Output: Fixed Effect Models

Dependent Variable: JPM?
Method: Pooled Least Squares
Date: 04/10/17 Time: 23:47
Sample: 2012 2015
Included observations: 4
Cross-sections included: 409
Total pool (balanced) observations: 1636

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	60.75243	0.205042	296.2932	0.0000
ADD?	-3.86E-09	8.41E-09	-0.459360	0.6461

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.997015	Mean dependent var	60.67207
Adjusted R-squared	0.996019	S.D. dependent var	68.56034
S.E. of regression	4.325915	Akaike info criterion	5.979850
Sum squared resid	22942.80	Schwarz criterion	7.333153
Log likelihood	-4481.517	Hannan-Quinn criter.	6.481815
F-statistic	1001.119	Durbin-Watson stat	1.874915
Prob(F-statistic)	0.000000		

Appendix 4. Eviews Output: Random Effect Models

Dependent Variable: JPM?
Method: Pooled EGLS (Cross-section random effects)
Date: 04/10/17 Time: 23:52
Sample: 2012 2015
Included observations: 4
Cross-sections included: 409
Total pool (balanced) observations: 1636
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	60.69410	3.309504	18.33933	0.0000
ADD?	-1.06E-09	8.39E-09	-0.126290	0.8995

Appendix 5. Eviews Output: Chow Test

Redundant Fixed Effects Tests
Pool: PANEL
Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	961.381148	(408,1226)	0.0000
Cross-section Chi-square	9441.759665	408	0.0000

Cross-section fixed effects test equation:
Dependent Variable: JPM?
Method: Panel Least Squares
Date: 04/11/17 Time: 00:00
Sample: 2012 2015
Included observations: 4
Cross-sections included: 409
Total pool (balanced) observations: 1636

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	51.18040	2.003664	25.54341	0.0000
ADD?	4.56E-07	5.40E-08	8.455046	0.0000

R-squared	0.041916	Mean dependent var	60.67207
Adjusted R-squared	0.041330	S.D. dependent var	68.56034
S.E. of regression	67.12859	Akaike info criterion	11.25232
Sum squared resid	7363209.	Schwarz criterion	11.25892
Log likelihood	-9202.397	Hannan-Quinn criter.	11.25477
F-statistic	71.48780	Durbin-Watson stat	0.018159
Prob(F-statistic)	0.000000		

Appendix 6. Eviews Output: Hausman Test

Correlated Random Effects - Hausman Test
Pool: PANEL
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	22.005007	1	0.0000

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
ADD?	-0.000000	-0.000000	0.000000	0.0000

Cross-section random effects test equation:
Dependent Variable: JPM?
Method: Panel Least Squares
Date: 04/11/17 Time: 00:06
Sample: 2012 2015
Included observations: 4
Cross-sections included: 409
Total pool (balanced) observations: 1636

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	60.75243	0.205042	296.2932	0.0000
ADD?	-3.86E-09	8.41E-09	-0.459360	0.6461

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.997015	Mean dependent var	60.67207
Adjusted R-squared	0.996019	S.D. dependent var	68.56034
S.E. of regression	4.325915	Akaike info criterion	5.979850
Sum squared resid	22942.80	Schwarz criterion	7.333153
Log likelihood	-4481.517	Hannan-Quinn criter.	6.481815
F-statistic	1001.119	Durbin-Watson stat	1.874915
Prob(F-statistic)	0.000000		

Appendix 7. Eviews Output: Lagrange Multiplier Test

Lagrange multiplier (LM) test for panel data
Date: 04/11/17 Time: 00:04
Sample: 2012 2015
Total panel observations: 1636
Probability in ()

Null (no rand. effect) Alternative	Cross-section One-sided	Period One-sided	Both
Breusch-Pagan	154.6835	1.915769	156.5992
	(0.0000)	(0.1663)	(0.0000)
Honda	12.43718	-1.384113	7.815699
	(0.0000)	(0.9168)	(0.0000)
King-Wu	12.43718	-1.384113	-0.316472
	(0.0000)	(0.9168)	(0.6242)
GHM	--	--	154.6835
	--	--	(0.0000)

Appendix 8. Eviews Output: Classical Assumption Test of Autocorrelation (Durbin Watson)

Dependent Variable: JPM
Method: Panel Least Squares
Date: 04/12/17 Time: 21:56
Sample: 2012 2015
Periods included: 4
Cross-sections included: 409
Total panel (balanced) observations: 1636

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	60.75243	0.205042	296.2932	0.0000
ADD	-3.86E-09	8.41E-09	-0.459360	0.6461

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.997015	Mean dependent var	60.67207
Adjusted R-squared	0.996019	S.D. dependent var	68.56034
S.E. of regression	4.325915	Akaike info criterion	5.979850
Sum squared resid	22942.80	Schwarz criterion	7.333153
Log likelihood	-4481.517	Hannan-Quinn criter.	6.481815
F-statistic	1001.119	Durbin-Watson stat	1.874915
Prob(F-statistic)	0.000000		

Appendix 9. Eviews Output: Classical Assumption Test of Heteroskedasticity (Glejser)

Dependent Variable: RESABS
Method: Panel Least Squares
Date: 04/12/17 Time: 22:10
Sample: 2012 2015
Periods included: 4
Cross-sections included: 409
Total panel (balanced) observations: 1636

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.233225	0.078771	28.35079	0.0000
ADD	1.82E-09	3.23E-09	0.563813	0.5730

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.766547	Mean dependent var	2.271117
Adjusted R-squared	0.688666	S.D. dependent var	2.978451
S.E. of regression	1.661895	Akaike info criterion	4.066519
Sum squared resid	3386.083	Schwarz criterion	5.419822
Log likelihood	-2916.413	Hannan-Quinn criter.	4.568484
F-statistic	9.842535	Durbin-Watson stat	2.570414
Prob(F-statistic)	0.000000		