Eduvest – Journal of Universal Studies
Volume 2 Number 4, April, 2022
p- ISSN 2775-3735- e-ISSN 2775-3727

ANALYSIS OF FACTORS AFFECTING REGIONAL FINANCIAL INDEPENDENCE IN THE FRAMEWORK OF A POLICY STRATEGY FOR INCREASING REGIONAL ORIGINAL INCOME

Vissia Dewi Haptari, Ari Mulianta Ginting, Ferdinand David Aritonang
PKN STAN, Pusat Penelitian, Badan Keahlian, Setjen DPR RI, Badan Pusat Statistik, Bengkulu, Indonesia
Email: vissiadewih@pknstan.ac.id, ari.ginting@dpr.go.id, ferdinand.david@bps.go.id

ARTICLE INFO

Received:
March, 26th 2022
Revised:
April, 16th 2022
Approved:
April, 18th 2022

ABSTRACT

The regional autonomy policy, which is accompanied by the provision of balancing funds, has a goal, one of which is to have an impact on the financial independence of regency/municipal governments in Indonesia. The balancing funds provided should have an effect or have an impact on regional financial independence. This research is directed to see to what extent the relationship of fiscal decentralization can provide an increase in regional financial independence. Based on the results of the panel data regression analysis of the district/city data clusters, the results showed various results. In clusters I and IV, it shows that there is a positive and significant effect of the provision of balancing funds on regional financial independence. Meanwhile, based on the results of panel regression analysis in regencies/cities in cluster II, it shows that the provision of balancing funds has no significant effect on regional financial independence. The districts/cities in cluster III show that the balancing fund variable has a negative and significant influence on the financial independence of local governments. This implies that the provision of balancing funds for districts/cities in cluster III actually makes local governments dependent on transfer funds from the central government.

How to cite: Vissia Dewi Haptari, Ari Mulianta Ginting, Ferdinand David Aritonang. (2022). Analysis of Factors Affecting Regional Financial Independence in the Framework of A Policy Strategy for Increasing Regional Original Income. Journal Eduvest. *Vol 2*(4): 777-796
E-ISSN: 2775-3727
Published by: https://greenpublisher.id/

KEYWORDS Fiscal Decentralization, Balance Fund, Regional Independence

INTRODUCTION

Law (UU) No. 22 of 1999 concerning Regional Government became the forerunner and became a new milestone for the era of decentralized governance in Indonesia. If explored more comprehensively philosophically, Law no. 22 of 1999 is diversity in unity. There are four considerations that provide a philosophical foundation in Law no. 22 of 1999, but one of the important points in the consideration is the paradigm of granting flexibility to the Regions to carry out Regional Autonomy. The law also provides for the transfer of governmental authority and the implementation of the duties and responsibilities of several central government responsibilities to local governments. The delegation of authority is of course accompanied by the provision of fiscal decentralization funds as stated in Law no. 33 of 2004(Siswanto, 2013).

Further developments Law no. 22 of 1999 concerning Regional Government Law no. 25 of 1999 concerning Fiscal Balance was revised several times, until in the end it became Law no. 23 of 2014 concerning Regional Government and Law no. 33 of 2004 concerning Fiscal Balance is the legal basis for the implementation of fiscal autonomy and decentralization in Indonesia (Halim, 2004). The impact of the implementation of fiscal decentralization is marked by the process of transferring authority from the central government to local governments. The process of delegation of authority is accompanied by greater financial transfer assistance to regional governments in the form of balancing funds (Otsuka & Kalirajan, 2012).

The balancing fund itself according to Law no. 33 of 2004 concerning Financial Balance, consisting of 3 parts of balancing funds, namely profit-sharing funds (DBH), general allocation funds (DAU) and special allocation funds (DAK). The distribution of the balancing funds is in accordance with the formulations and calculations that have been determined by the central government. For example, the total amount of DAU is set to be at least 26% of the Net Domestic Revenue set in the APBN (Widarjono, 2013). The amount of DAU received by each region is calculated independently by taking into account and taking into account the population, area, construction cost index, regional gross domestic product (GRDP) per capita and the Human Development Index (IPM). DBH is given to regions that have natural resources as a consequence of having to get a share of the revenue in these natural resources. Meanwhile, DAK is allocated specifically to certain regions to fund special activities which are regional affairs(Asyifa, n.d.).

The provision of fiscal transfer funds, both DAU, DBH, DAK in principle is to reduce the fiscal gap between the central government and regional governments (vertical fiscal imbalance) and between regions (horizontal fiscal imbalance) in the administration of government. This inequality can be measured by the deviation between the regional gross domestic product, both nominal and per capita, between regions compared to the national average as well as between regions or regions. Of course, the smaller the difference or gap, the more successful the implementation of fiscal decentralization (Syahril, Parinsi, & Togas, 2021)

However, in the development of fiscal decentralization and regional autonomy, several obstacles have emerged. One of them is the dependence of local governments on fiscal decentralization funds provided by the central government to local governments. The provision of fiscal decentralization funds does not provide a stimulus for local governments to increase local revenue (PAD). This is because local governments have a proportionate dependence on decentralized funds as the main source of revenue from the Regional Budget (APBD). The dependence of local governments on the value of central government transfers shows that the ability of the regions to finance their budgets is relatively small. The impact is that the regional government demands a larger transfer from the central government than exploring the source

of its original regional revenue (PAD). This is indicated by the low contribution of local government PAD in financing regional expenditures which is no more than 20 percent (Waluyo, 2007).

Whereas in the era of regional autonomy it was implemented with the ultimate goal of increasing community welfare. The process of achieving community welfare improvement requires a source of regional income and regional development. Regional taxes and regional levies are one of the sources of regional revenue (Mustanir, Yasin, Irwan, & Rusdi, 2019). The subsequent impact is the obligation for regions to take care of their own households and continue to strive to strengthen their independence through efforts to maximize the collection of regional taxes and regional levies. Law No. 28 of 2009 has provided policy points regarding regional taxes and regional levies. The regulated provisions include the mechanism for the open list to become a close list, the expansion of the authority of taxation and retribution by expanding the regional tax base and improving the system management of regional taxes and regional levies through a policy of sharing the results of provincial taxes to regencies/cities.

Related to tax collection, one of the indicators to measure the amount of tax revenue is to use the tax ratio (tax ratio). The tax ratio is the ratio between the amount of tax revenue and the income of an economy. In the context of regional finance, the tax ratio is the ratio between the regional taxes of the region's economy and the Regional Gross Regional Income (GRDP). Therefore, by knowing the tax ratio of a region, we can understand the amount of regional revenue as 2019 data shows the tax ratio in the aggregate of provinces throughout Indonesia. Based on the figure, it can be seen that the Province that has the highest tax ratio is Bali Province with a ratio of 8.8%. The high tax ratio in the Province of Bali is due to the very high local tax of the Province of Bali (Fafurida & Pratiwi, 2017). The average tax ratio across Indonesia is 2.9%. The existing condition is that most of the provinces in Indonesia are still below the national average tax ratio throughout Indonesia, including the provinces of East Java, Central Java to Papua and West Papua (ANTIKA, 2018).

Another factor in regional financial independence is the allocation of balancing funds that pay more attention to the expenditure aspect but is not supported by the accuracy of calculating the ability of the region to increase its PAD, so that local governments do not optimize regional capabilities and demand a larger allocation from the central government. This has become a phenomenon of the flypaper effect, where local governments allocate more regional spending than the source of balancing funds, (Syukridan and Halim, 2004); (Maimunah, 2006). In line with the results of research (Mulya Rahmatul, 2016) which states that the impact of the flypaper effect can cause fiscal gaps, not optimal potential for extracting PAD, dependence on the central government, making regional finance less independent.

The role of the funds allocated by the central government is not optimal in increasing regional capacity, especially regional financial independence in increasing their fiscal capacity. Regional financial independence, which is indicated by the size of the Regional Original Income (PAD) compared to income from other sources, such as central government assistance and regional loans, makes PAD an important contribution. PAD plays an important role in the contribution of local government expenditure financing (Berwulo, Luigi LD et al., 2017) that the effectiveness of regional finance is shown by the increase in regional revenues in the city of Jayapura, although the regional independence is still small, this is due to the large number of financing that must be allocated . In addition, PAD has a contribution to the Regional Revenue and Expenditure Budget (APBD) which is allocated to finance the administration of administrative processes, government services and regional development. Optimizing PAD requires a strategy and exploring the potential and competence of regional financial managers. (Nilawati, 2019). Regional taxes, regional levies, the results of separated state wealth management and other legitimate regional revenues can increase PAD in the province of Central Java (Nuzulistyan, Supriyanto, & Paramita, 2017).

Based on the explanation above, previous empirical research has used panel regression analysis on districts/cities without any attempt to use research data clusters. This research is important because it is based on the results of studies by various academics and the Ministry of Finance that reformulation of balancing funds is needed, especially in relation to this research focusing on regional financial independence. This study tries to cluster districts/cities as the research locus. The use of cluster data in this study is based on the results of a study conducted by the Directorate General of Fiscal Balance with the Australian Indonesia Partnership for Decentralization (AIPD) which explains that one of the criticisms of the balancing fund policy so far is "one size fits all" which means that the fund formula the current balance tends to apply equally between city and district governments. The implementation of this policy should be improved with a solution of regional grouping (clustering) to avoid the provision of balancing funds that are not in accordance with the characteristics of city and district governments.

The balancing funds provided should have an effect or have an impact on regional financial independence, such as previous research conducted by Fafurida and Pratiwi (2017); Simanjuntak and Mukhlis (2016) and Suprantiningrum (2015), Yannis and Zoi (2015). Within the framework of this understanding, this research is directed to see as far as where the relationship of fiscal decentralization can provide an increase in regional financial independence. Based on the background explanation, this research is focused on examining what factors encourage regional financial independence (2) How does the provision of balancing funds affect regional financial independence (3) What policies can encourage regional financial independence.

RESEARCH METHOD

The scope of the research includes all districts and cities in Indonesia that receive balancing funds in the form of General Allocation Funds (DAU), Special Allocation Funds (DAK), Revenue Sharing Funds (DBH). The total number of regencies/cities that became the unit of analysis in this study were 508 regencies, except for the urban regencies in the DKI Jakarta province by dividing the regencies/cities into 4 research data clusters. The variables used in this study include the dependent variable and the independent variable. The dependent variable is the ratio of regional financial independence, while the independent variables include tax growth, regional retribution growth, GRDP growth, central government transfers, direct spending, and indirect spending.

The analytical method in this research is divided into two, namely descriptive analysis method and inferential analysis method. The second method of analysis is the method of inferential analysis. The use of the inferential analysis method has the aim of making conclusions from a problem based on statistical rules in proving the truth of a hypothesis. This study uses panel data regression analysis as a method of inference analysis. The use of panel data analysis in this study aims to determine the factors that influence regional financial independence as the dependent variable. The independent variables in this study include tax growth, regional retribution growth, GRDP growth, central government transfers, direct spending, and indirect spending.

RESULT AND DISCUSSION

The central government distributes balancing funds to every district/city in Indonesia to reduce the fiscal gap between regions. The balancing funds include general allocation funds, special allocation funds, and special autonomy funds. These funds become one of the drivers of the economy in each district/city. This study divides each district into 4 clusters based on the criteria of each region's financial independence ratio. In addition to balancing funds, there are several other indicators to determine the financial independence of each region. These indicators are direct spending, indirect spending, GRDP growth, taxes and levies. The research period for 7 years from 2013 to 2019 consisted of 415 districts/cities in Indonesia. In this study,

not all districts/cities were included in the research object because of the unavailability of research data in these districts/cities.

The quadrant formation method refers to clusters based on data on average balancing funds and PAD for each district/city during 2013 to 2019. The general picture per quadrant is a picture of balancing funds and PAD from each district/city that shows a general picture of regional financial independence. So the quadrant method will map each cluster into 4 quadrants. The quadrant with the following details:

a) Quadrant I: regencies/cities that have the characteristics of having large/high balancing funds but have low PAD.
b) Quadrant II: ie districts/cities that have the characteristics of having large/high balancing funds with high/large PAD.
c) Quadrant III: ie districts/cities that have the characteristics of having low balancing funds but having low PAD.
d) Quadrant IV: ie districts/cities that have the characteristics of having low balancing funds and high/large PAD.

1. Overview of Financial Independence in Regencies/Cities in Cluster I Period 2013-2020

Cluster I are districts/cities that have additional funds other than the provision of balancing funds by the central government to local governments, for example districts/cities in Papua/West Papua Province, Aceh which receive funds in the framework of Special Autonomy and the Province of the Special Region of Yogyakarta which receives privileged funds. . The number of regencies/cities in cluster 1 is 47. Regencies/cities included in cluster 1 are regencies/cities that receive additional funds in addition to balancing funds. In cluster 1 for 7 years from 2013 to 2019, the average balancing fund provided by the central government was 1.13 trillion rupiah with a standard deviation of 1.65 trillion rupiah. The largest balancing fund value was 9.62 trillion rupiahs given to the Asmat district in 2014, while the minimum value was 100 billion rupiahs given to the city of Jayapura in 2016.

In 2013-2019 the average value of PAD generated was 93.17 billion rupiah. PAD is a source of revenue in a certain area which is collected based on certain laws. The standard deviation value of district/city PAD in cluster 1 is 122.19 billion rupiah. The maximum PAD value in cluster 1 is 867 billion, namely in Sleman district in 2019, while the smallest PAD value is Puncak Jaya district in 2013.

GRDP growth is an economic indicator to calculate the amount of economic activity in a region. Positive and increasing economic growth indicates that economic activity in the region is running smoothly and well. On average from 2013 to 2019, economic growth in cluster 1 was 5.13 percent with a standard deviation of 2.65 percent. The highest economic growth was in Kulon Progo district in 2019, while the lowest economic growth was in Lhokseumawe City in 2015.

Statistik Deskriptif Variabel Dana Perimbangan, PAD, Pertumbuhan PDRB Tahun 2013-2019 di Kluster 1

No.	Indikator	Dana Perimbangan	PAD	Pertumbuhan PDRB
(1)	(2)	(3)	(4)	(5)
1	Rata-Rata	1,131,880,173,945	93,178,864,825	5.13
2	Standar deviasi	1,648,140,453,915	122,196,133,619	2.65
3	Nilai Maksimum	9,620,279,299,740	867,643,469,527	13.49
4	Nilai Minimum	100,241,952,200	3,509,940,885	-20.34

Sumber: Data Diolah (2020).

Taxes and levies are a source of income in an area. Through funds collected from taxes and levies, regions can improve development and infrastructure. During 2013 to 2019, the average amount of taxes and levies collected reached 34.25 billion and 12.1 billion with a standard deviation of 86.13 billion and 13.54 billion, respectively. The largest taxes collected in districts/cities located in cluster 1 reached 650 billion, namely Sleman district in 2019, while

the smallest was in Supiori district in 2013. The largest levy was in Aceh Tamiang district in 2014, while the smallest was 6. 04 million in Mamberamo Raya district in 2019.

Direct spending and indirect spending are government spending that aims as a stimulus in moving the economy. From 2013 to 2019, the average direct and indirect expenditure of districts/cities in cluster 1 was 566 billion and 600 billion with standard deviations of 236.23 billion and 277.91 billion, respectively. The largest direct expenditure was in Bintuni Bay in 2019, while the smallest was 135.55 billion in the city of Sabang in 2013. The largest indirect expenditure was in Sleman district in 2016 of 1.56 trillion, while the smallest was in Mamberamo Raya district in 2013.

Statistik Deskriptif Variabel Pajak, Retribusi, Belanja Langsung dan Belanja Tidak Langsung Tahun 2013-2019 di Kluster 1

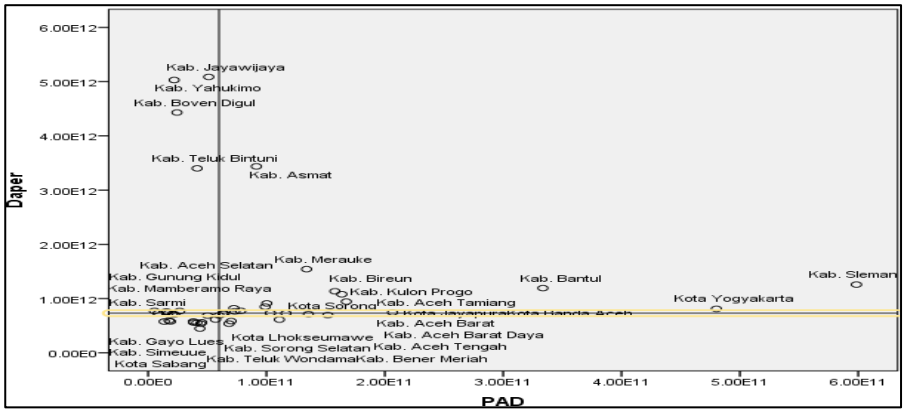
No.	Indikator	Pajak	Retribusi	Belanja Langsung	Belanja Tidak Langsung
(1)	(2)	(3)	(4)	(5)	(6)
1	Rata-Rata	34,251,011,114	12,100,085,481	566,209,385,262	600,446,660,700
2	Standar deviasi	86,138,410,862	13,548,729,606	236,235,838,379	277,915,787,846
3	Nilai Maksimum	650,084,598,498	71,737,834,712	1,697,549,559,042	1,567,946,127,944
4	Nilai Minimum	42,630,640	6,040,000	135,556,540,511	77,239,982,651

Sumber: Data Diolah (2020).

The formation of quadrant in cluster 1 is based on data on average balancing funds and PAD for each district/city during 2013 to 2019. Quadrant I in the figure indicates districts/cities that have a high average balancing fund, but low PAD. The districts included in quadrant 1 are Jayawijaya district, Yahukimo district, Boven Digul district, and Teluk

Bintuni district. The four regencies are located in Papua and West Papua. Furthermore, in quadrant II are districts/cities that have high PAD and high balancing funds. Several regencies/cities that fall into this quadrant are the City of Yogyakarta, Merauke Regency, and Aceh Tamiang Regency. Quadrant III is the quadrant for districts/cities that have a low average balancing fund and PAD. Several districts that fall into quadrant III are Gayo Lues and Simeulue districts. Whereas in quadrant IV, the districts/cities that are included are districts/cities that have low balancing funds, but have high PAD. Several regencies/cities that fall into quadrant IV are West Aceh, Southwest Aceh and Central Aceh districts.

Quadrant III is the quadrant for districts/cities that have a low average balancing fund and PAD. Several districts that fall into quadrant III are Gayo Lues and Simeulue districts. Whereas in quadrant IV, the districts/cities that are included are districts/cities that have low balancing funds, but have high PAD. Several regencies/cities that fall into quadrant IV are West Aceh, Southwest Aceh and Central Aceh districts.



Quadrant Based on PAD and District/City Balancing Funds in Cluster 1 2013 – 2019

2. Overview of Financial Independence in Regencies/Cities in Cluster II Period 2013-2020

Districts/cities classified into cluster II are districts/cities that have a ratio of PAD to balancing funds of more than 50 percent. In cluster II, there are 23 districts/cities. During the period 2013 to 2019, the average balancing fund sent by the central government to districts/cities in cluster II was 1.2 trillion annually with a standard deviation of 530.72 billion rupiah. The largest balancing fund value was given to the city of Bandung in 2016, while the smallest balancing fund value was given to the city of Kendari in 2016.

PAD as a source of regional original income is the main driving force and motor of the economy in a region. The average amount of district/city PAD during the period 2013 to 2019 in cluster II is 1.26 trillion rupiah with a standard deviation of 1.08 trillion rupiah. The largest PAD during this period was in Bandung district in 2019, while the smallest PAD was in Morowali district in 2013.

Analisis Deskriptif Dana Perimbangan, PAD, dan Pertumbuhan PDRB Tahun 2013-2019 di Kluster II

No.	Indikator	Dana Perimbangan	PAD	Pertumbuhan PDRB
(1)	(2)	(3)	(4)	(5)
1	Rata-Rata	1,295,126,479,120	1,264,011,791,837	6.90
2	Standar deviasi	530,727,465,332	1,084,479,360,675	5.22
3	Nilai Maksimum	2,802,754,414,240	6,791,520,731,810	67.82
4	Nilai Minimum	104,832,631,500	36,673,796,750	0.09

Sumber: Data Diolah (2020).

The average amount of tax collected by districts/cities in cluster II is 959.5 billion rupiah per year with a standard deviation of 842.16 billion. The largest amount of taxes collected during the 2013 – 2019 period was in Bandung district in 2019, while the smallest was in Morowali district in 2014. In terms of expenditure, the city of Surabaya is the city that has the largest direct expenditure in cluster II, which is 6.99 trillion rupiah in 2019, while the smallest was Morowali district in 2014. During the 2013-2019 period the average district/city direct expenditure in cluster II was 1.7 trillion rupiah with a standard deviation of 1.09 trillion rupiah.

Analisis Deskriptif Pajak, Retribusi, Belanja Langsung, dan Belanja Tidak Langsung Tahun 2013-2019 di Kluster II

No.	Indikator	Pajak	Retribusi	Belanja Langsung	Belanja Tidak Langsung
(1)	(2)	(3)	(4)	(5)	(6)
1	Rata-Rata	959,509,762,673	87,480,057,277	1,703,674,379,480	1,426,347,143,806
2	Standar deviasi	842,162,040,655	76,257,076,254	1,094,899,702,696	666,787,297,370
3	Nilai Maksimum	4,217,319,393,186	557,966,574,670	6,993,376,613,816	3,407,308,688,191
4	Nilai Minimum	5,478,277,179	10,925,787,599	215,955,286,716	258,188,282,984

Sumber: Data Diolah (2020).

Based on the quadrant analysis in cluster II where the Y axis is the average district/city balancing fund during the period 2013 to 2019 and the X axis is the average district/city PAD during the period 2013 to 2019. Quadrant I is the quadrant for districts with equal balance funds. high but low PAD funds. Only the city of Palembang is included in quadrant I. Furthermore, quadrant II is the division of territory for districts/cities that have high balancing funds and high PAD funds. Several regencies/cities that are included in quadrant II are Tangerang Regency, Bekasi City, and Surabaya City. The city of Surabaya has the largest average PAD compared to other districts/cities in cluster II.

Quadrant III is an area for districts/cities that have PAD and balancing funds that are smaller than the average balancing funds and PAD for districts/cities in cluster II. Some areas that fall into cluster II are Morowali district, Cirebon city, and Denpasar city. While quadrant

IV is a district/city that has a large PAD, but has a small balancing fund. Several counties. Cities that fall into quadrant IV are Badung Regency and South Tangerang City.

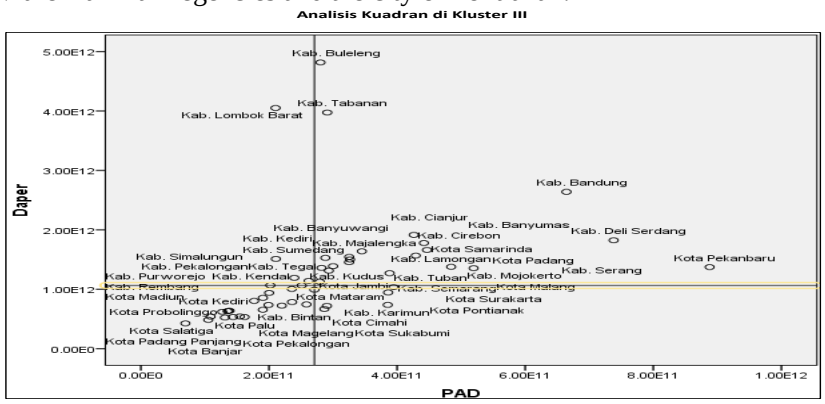
The regencies/cities in cluster III that generate the largest taxes are Deli Serdang Regency in 2019, which is 4.2 trillion, while the smallest is Padang Panjang City in 2013. The average amount of taxes obtained by regencies/cities in cluster III is 959, 5 billion rupiah per year with a standard deviation of 842.16 billion rupiah. For direct expenditures, Bandung district in 2019 had the largest direct expenditure which reached 6.99 trillion rupiah, while the smallest was Padang Panjang city in 2013. The average value of direct spending made by districts/cities in cluster III was 1.7 trillion rupiah per year..

Analisis Deskriptif Pajak, Retribusi, Belanja Langsung, dan Belanja Tidak Langsung Tahun 2013-2019 di Kluster III

No.	Indikator	Pajak	Retribusi	Belanja Langsung	Belanja Tidak Langsung
(1)	(2)	(3)	(4)	(5)	(6)
1	Rata-Rata	959,509,762,673	87,480,057,277	1,703,674,379,480	1,426,347,143,806
2	Standar deviasi	842,162,040,655	76,257,076,254	1,094,899,702,696	666,787,297,370
3	Nilai Maksimum	4,217,319,393,186	557,966,574,670	6,993,376,613,816	3,407,308,688,191
4	Nilai Minimum	5,478,277,179	10,925,787,599	215,955,286,716	258,188,282,984

Sumber: Data Diolah (2020).

Quadrant I is an area for regencies/cities that have high balancing funds and low PAD. One of the regencies/cities in quadrant I is West Lombok regency. Next is quadrant II, where there is the city of Pekanbaru and the city of Padang in it. Quadrant II is an area with large PAD and large balancing funds. Quadrant III is an area where PAD and balancing funds are relatively small compared to the average for all districts/cities in cluster III. Some of these cities/districts are the city of Salatiga and the city of Kediri. Finally, districts/cities in quadrant IV are districts/cities that have large PAD, but small balancing funds. The regencies/cities that fall into quadrant IV are Karimun regencies and the city of Pontianak.

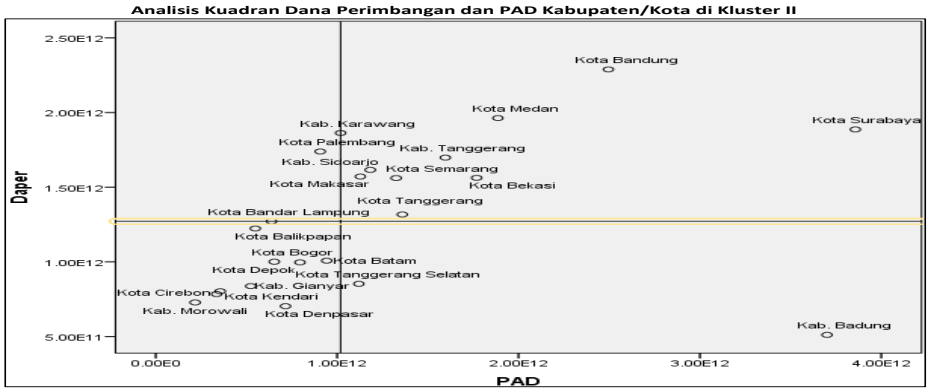


Sumber: Data Diolah (2020).

4. Overview of Financial Independence in Regencies/Cities in Cluster IV Period 2013-2020

There are 292 regencies/cities in cluster IV, of which regencies/cities classified into cluster IV are regencies/cities that have a proportion of PAD to balancing funds of less than 25 percent.

The average amount of balancing funds received by districts/cities in cluster III is 1.18 trillion with a standard deviation of 2.1 trillion. The largest balancing fund amount was 71.5 trillion rupiah, namely Tanggamus district in 2013, while the smallest amounted to 100 billion was in Landak district in 2017. For PAD funds, the average district/city in cluster III was 97.5 billion rupiah with standard deviation of 88.23 billion. The largest PAD generated, which amounted to 643 billion in Pasuruan district in 2019, while the smallest was in South Buru district in 2013.



Sumber: Data Diolah (2020).

3. Overview of Financial Independence in Regencies/Cities in Cluster III 2013-2020 Period

Districts/cities classified into cluster III are districts/cities that have a proportion of PAD compared to the Balancing Fund between 25 percent – 50 percent. In cluster III there are 53 districts/cities. The average amount of balancing funds received by districts/cities in cluster III is 1.26 trillion rupiah with a standard deviation of 1.23 trillion rupiah. Meanwhile, the average PAD generated by districts/cities in cluster III is 291.93 billion rupiahs with a standard deviation of 188.37 billion rupiahs. Another indicator is GRDP growth, where the average GRDP growth for districts/cities in cluster III is 5.56 percent with a standard deviation of 1.12 percent.

The largest balancing fund in cluster III of 9.7 trillion was in Buleleng district in 2015, while the smallest was in Pontianak City in 2016. For PAD funds generated during the period 2013 to 2019, Pekanbaru City was the city with the largest PAD in cluster II in in 2016, while the smallest was North Lombok Regency in 2013.

Analisis Deskriptif Dana Perimbangan, PAD, dan Pertumbuhan PDRB Tahun 2013-2019 di Kluster III

No.	Indikator	Dana Perimbangan	PAD	Pertumbuhan PDRB
(1)	(2)	(3)	(4)	(5)
1	Rata-Rata	1,262,950,445,970.32	291,936,813,464.31	5.56
2	Standar deviasi	1,230,397,365,354.28	188,373,365,755.51	1.12
3	Nilai Maksimum	9,770,182,860,000.00	1,243,438,534,336.00	9.30
4	Nilai Minimum	102,243,025,535.00	35,285,969,506.00	-0.86

Sumber: Data Diolah (2020).

Analisis Deskriptif Dana Perimbangan, PAD, dan Pertumbuhan PDRB Tahun 2013-2019 di Kluster IV

No.	Indikator	Dana Perimbangan	PAD	Pertumbuhan PDRB
(1)	(2)	(3)	(4)	(5)
1	Rata-Rata	1,186,221,913,009.08	97,504,884,344.94	5.46
2	Standar deviasi	2,104,071,966,592.22	88,231,996,091.18	2.11
3	Nilai Maksimum	71,567,021,624,736.00	643,350,343,365.00	38.22
4	Nilai Minimum	100,235,786,200.00	1,490,176,000.00	-9.66

Sumber: Data Diolah (2020).

In addition to the indicators of balancing funds, PAD, and economic growth, there are other indicators in measuring the financial independence of a region, namely the value of taxes, user charges, direct spending, and indirect spending. The average amount of tax generated is 31.16 billion rupiah with a standard deviation of 41.73 billion. The largest amount of tax generated was 383.74 billion rupiah, namely Pasuruan district in 2017, while the district/city that had the smallest tax was Merangin district in 2016. From the expenditure side, it can be seen that the average amount of direct expenditure of districts/cities in clusters IV is 552.77 billion rupiah with a standard deviation of 325.81 billion. The largest direct expenditure value of 4.5 trillion was in the Kutai Kartanegara district in 2013, while the smallest direct expenditure was in the Buru district in 2013.

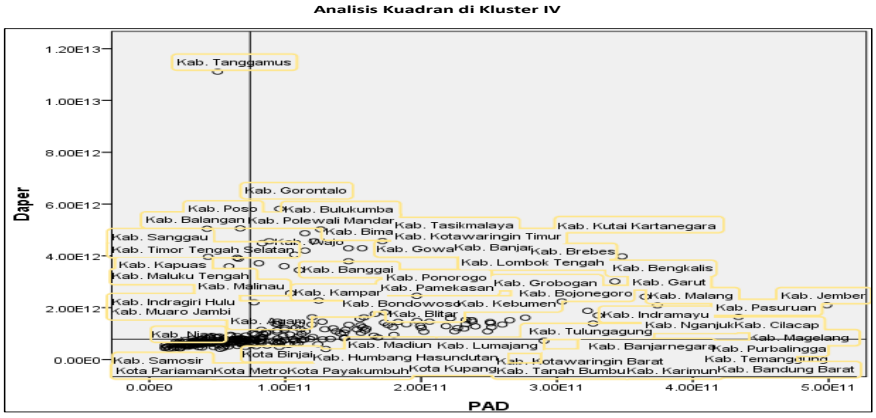
Analisis Deskriptif Pajak, Retribusi, Belanja Langsung, dan Belanja Tidak Langsung Tahun 2013-2019 di Kluster IV

No.	Indikator	Pajak	Retribusi	Belanja Langsung	Belanja Tidak Langsung
(1)	(2)	(3)	(4)	(5)	(6)
1	Rata-Rata	31,164,127,774.83	11,519,956,880.68	552,775,756,782.80	694,907,752,579.50
2	Standar deviasi	41,735,964,478.43	12,216,031,655.96	325,817,763,832.60	402,016,621,736.01
3	Nilai Maksimum	383,743,763,642.93	162,923,495,725.00	4,539,531,892,452.00	2,843,063,170,398.20
4	Nilai Minimum	184,700,111.00	175,625,100.00	94,772,518,311.00	91,740,905,568.00

Sumber: Data Diolah (2020).

The division of quadrants in regencies/cities in cluster IV is based on the average value of balancing funds and PAD. Quadrant I is an area with high balancing funds but relatively small PAD generated. There are several regencies/cities in cluster I, namely Sanggau Regency and Balangan Regency. While quadrant II is a district/city that has a high balance of funds and PAD, some districts/cities in quadrant II are Kutai Kartanegara Regency and Brebes Regency.

Furthermore, regencies/cities in quadrant III are regencies/cities that have balancing funds and relatively small PAD. Several districts/cities in quadrant III are Samosir district and Pariaman city. Quadrant IV is a district/city with relatively large PAD funds and small balancing funds, some of which are Humbang Hasundutan Regency and Binjai City.



Sumber: Data Diolah (2020).

5. Panel Data Regression Analysis and Model Interpretation per Cluster

In conducting the analysis, the panel data regression and interpretation of the resulting model went through several test stages. The panel data regression model consists of 3, namely the common effect model, the fixed effect model, and the random effect model. In determining the best model, it is necessary to do some statistical tests on the regression models that are formed.

In Cluster I, the first test is to choose the best model between the common effect model and the fixed effect model using the Chow test. The hypothesis is as follows:

H0 : 1 = 2 = . . . = i = (common effect model)

H1 : i j (fixed effect model)

Where is the resulting residual. Based on the chow test, the following results were obtained:

Tabel Hasil Uji Chow pada Kluster 1

Effects Test	Statistic	d.f.	Prob.
(1)	(2)	(3)	(4)
Cross-section F	11,55386721	(46,276)	0.00
Cross-section Chi-square	353,1863725	46	0.00

Sumber: Data Diolah (2020).

Prob value. The p-value of the test in cross-section F and cross-section chi square of 0.00 gives the decision that H0 is rejected, so it is concluded that the fixed effect model is the best model. Furthermore, testing is carried out through the Hausman test to choose the best model between the fixed effect model and the common effect model.

The hypothesis in the Hausman test is as follows:

H0 : E(uit | Xit) = 0 (random effect model)

H1 : E(uit |Xit) 0 (fixed effect model)

Hausman test results are displayed as follows:

Tabel Hasil Uji Hausman pada Kluster 1

Test Summary	*Chi-Sq. Statistic*	*Chi-Sq. d.f.*	*Prob.*
(1)	(2)	(3)	(4)
Cross-section random	32.85056741	6	0.00

Sumber: Data Diolah (2020).

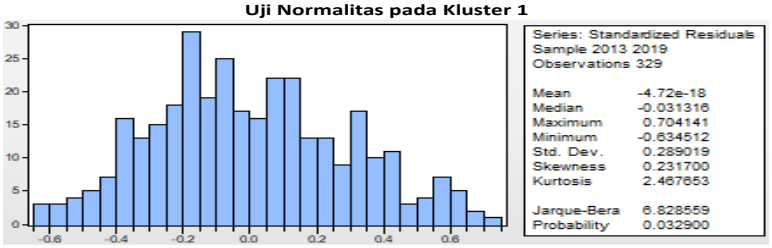
The p-value of the Hausman test is 0.00, this indicates that the decision is to reject H0, so it can be concluded that the best model is the fixed effect model. Based on the results of the Chow test and Hausman test, the best model is the fixed effect model.

After selecting the fixed effect model as the model that will estimate the parameters. The next step is to test the classical assumptions to ensure that the resulting estimate is BLUE (Best Linear Unbiased Estimator).

The p-value of the Hausman test is 0.00, this indicates that the decision is to reject H0, so it can be concluded that the best model is the fixed effect model. Based on the results of the Chow test and Hausman test, the best model is the fixed effect model. After selecting the fixed effect model as the model that will estimate the parameters. Next is to test the classical assumptions to ensure that the resulting estimate is BLUE (Best Linear Unbiased Estimator) which includes normality test and multicollinearity test.

The estimation method in the fixed effect model uses the Generalized Least Square (GLS) method. The use of the GLS method causes the resulting model to be robust to the problems of heteroscedasticity and autocorrelation. The first test is to test the normality of the resulting residuals. The results of the normality test using the jarque fallow test show a p-value of 0.032. This value indicates that at a significance level of 10 percent, the resulting residuals are normally distributed. The test results are as shown in the following table:

Uji Normalitas pada Kluster 1



Sumber: Data Diolah (2020).

Next is to do multicollinearity testing. The test results show that the VIF value for each independent variable is less than 5, so it can be concluded that the model is free from multicollinearity violations.

Hasil Uji Multikolinearitas pada Kluster 1

	Coefficient	*Centered*
Variable	*Variance*	VIF
(1)	(2)	(3)
C	3.510741862	
LOG(BL)	0.002697325	2.029957162
LOG(BTL)	0.005149733	1.787063299
LOG(DAPER)	0.001015084	1.07552948
LOG(PAJAK)	0.001372237	2.047077856
PDRB	5.26E-05	1.050277013
LOG(RETRIBUSI)	0.000431242	1.084637505

Sumber: Data Diolah (2020).

Panel Data Regression Model Interpretation in Cluster I

In Cluster 1, the fixed effect model is the model chosen to estimate the population. The classical assumptions have also been met, so the next step is to interpret the results in the panel data regression model. The results of the panel data regression model can be seen in the table as follows:

Model Regresi Data Panel di Kluster 1

Variable	*Coefficient*	*Std. Error*	*t-Statistic*	*Prob.*
(1)	(2)	(3)	(4)	(5)
C	-19.470	1.874	-10.391	0.000
LOG(BL)	0.500	0.052	9.635	0.000
LOG(BTL)	0.886	0.072	12.346	0.000
LOG(DAPER)	0.058	0.032	1.833	0.068
LOG(PAJAK)	0.188	0.037	5.063	0.000
PDRB	0.005	0.007	0.698	0.486
LOG(RETRIBUSI)	0.035	0.021	1.697	0.091
Uji F	244.038			
Prob. Uji F	0.000			
R-Squared	0.979			

Sumber: Data Diolah (2020).

The results of panel regression analysis on data in cluster 1 show that the variables of direct expenditure, indirect expenditure, taxes and levies as well as balancing funds have a positive and significant influence on the regional original income variable with a significance level of 10%. Meanwhile the regional economic growth variable does not have a significant effect on regional independence which is proxied by the regional original income growth variable. The results of the panel data regression analysis conclude that the variables of direct expenditure, indirect expenditure, taxes, levies and balancing funds have a positive and significant influence on increasing regional financial independence for districts/cities located in Cluster I.

The effect of the provision of positive balancing funds on regional financial independence as proxied by regional original growth indicates that the provision of balancing funds actually has a positive impact on regional financial independence even though the coefficient is relatively small. The results of this study are in line with research conducted by several previous studies, including Sulistyo (2017) who conducted research on the effect of balancing funds on financial independence. The results of the study found that the provision of balancing funds had a positive and significant effect on increasing regional financial independence.

In Cluster II, the first test in choosing the best model in panel data regression is to perform the Chow test to choose between the common effect model and the fixed effect model. The following is the hypothesis in the Chow test

H0 : 1 = 2 = . . . = i = (common effect model)

H1 : i j (fixed effect model)

Where is the resulting residual. Based on the chow test, the following results were obtained:

Hasil Uji Chow pada Kluster 2

Effects Test	*Statistic*	*d.f.*	*Prob.*
(1)	(2)	(3)	(4)
Cross-section F	11.73645867	(22,132)	0.00
Cross-section Chi-square	174.5019211	22	0.00

Sumber: Data Diolah (2020).

Prob value. the p-value of the test in cross-section F and cross-section Chi-square is 0.00. The p-value which is less than 5 percent alpha indicates that at the 5 percent significance level, the resulting decision is to reject H0 so that it can be concluded that the fixed effect model is the best model. Next, perform a test to choose between the fixed effect model and the random effect model through the Hausman test. The hypothesis in the Hausman test is as follows:

H0 : E(uit | Xit) = 0 (random effect model)

H1 : E(uit |Xit) 0 (fixed effect model)

Hausman test results are displayed as follows:

Uji Hausman pada Klaster II

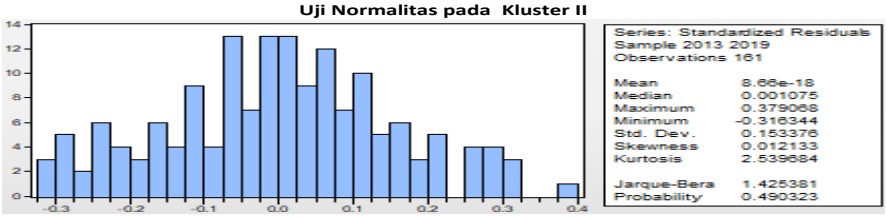
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
(1)	(2)	(3)	(4)
Cross-section random	105.461270	6	0.00

Sumber: Data Diolah (2020).

The p-value of the Hausman test is 0.00, this indicates that the decision is to reject H0, so it can be concluded that the best model is the fixed effect model. Based on the results of the Chow test and Hausman test, the best model is the fixed effect model. After selecting the fixed effect model as the model that will estimate the parameters. Next is to test the classical assumptions to ensure that the resulting estimate is BLUE (Best Linear Unbiased Estimator) which includes normality test and multicollinearity test.

The estimation method in the fixed effect model uses the Generalized Least Square (GLS) method. The use of the GLS method causes the resulting model to be robust to the problems of heteroscedasticity and autocorrelation. The first test is to test the normality of the resulting residuals. The results of the normality test using the fallow jarque test showed a p-value of 0.49. This value indicates that at a significance level of 0.05, the resulting residuals are normally distributed. The test results are as follows:

Uji Normalitas pada Kluster II



Sumber: Data Diolah (2020).

The next step is to perform multicollinearity testing to ensure that the independent variables have no relationship or are independent. The multicollinearity test results show that all variables have a VIF value of less than 5, so the multicollinearity assumption is met.

Uji Multikolinearitas pada Kluster II

	Coefficient	Centered
Variable	**Variance**	**VIF**
(1)	**(2)**	**(3)**
C	3.2264617	
LOG(BL)	0.0019274	2.859731544
LOG(BTL)	0.0048470	1.833430785
LOG(DAPER)	0.0019739	1.592257329
LOG(PAJAK)	0.0031565	4.513246917
PDRB	0.0000599	1.073575578
LOG(RETRIBUSI)	0.0009212	1.057615318

Sumber: Data Diolah (2020).

Interpretation of Harvest Data Regression Model in Cluster II

After selecting the best model, the fixed effect model was chosen as the best model using the GLS (Generalized Least Square) estimation method. From the model obtained, it is known that the coefficient of determination (R2) is 0.9869, meaning that all independent variables in the model are able to explain the dependent variable by 98.69 percent. The F test (Simultaneous Test) to determine whether the model is suitable or not indicates that the resulting model is suitable, this is based on the p-value of the F test of 0.00 which is smaller than the 5 percent alpha value.

Model Regresi Data Panel pada Kluster II

Variable	Coefficient	Std. Error	t-Statistic	Prob.
(1)	(2)	(3)	(4)	(5)
C	-8.965	1.796	-4.991	0.000
LOG(BL)	0.116	0.044	2.653	0.009
LOG(BTL)	0.212	0.070	3.050	0.003
LOG(DAPER)	-0.030	0.044	-0.674	0.502
LOG(PAJAK)	1.029	0.056	18.313	0.000
PDRB	-0.004	0.008	-0.530	0.597
LOG(RETRIBUSI)	0.010	0.030	0.345	0.730
Uji F	355.294			
Prob. Uji F	0.000			
R-Squared	0.9869			

Sumber: Data Diolah (2020).

Based on the selected fixed effect model, there are 3 variables that do not have a significant effect on PAD growth, namely the growth of balancing funds, GRDP growth and retribution growth. Meanwhile, the variables of direct expenditure growth, indirect expenditure growth, and tax growth have a significant effect on PAD growth at a significance level of 5 percent.

If there is an increase in direct expenditure growth of 1 percent, it will cause an increase in PAD growth of 0.116 percent. In cluster 2, the biggest cause of the increase in financial independence (growth in PAD) is the significant tax growth. If there is an increase in tax growth of 1 percent, it will increase PAD growth by 1.029 percent. These results indicate that the variables that affect the growth of district/city PAD in Cluster II are influenced by the growth of the direct expenditure variables, indirect spending and tax growth.

The results of panel regression analysis which show that the growth of balancing funds do not significantly affect the growth of PAD is in line with research conducted by Stone (2015) which examines the effect of balancing funds on the financial condition of the government. The results of the study found that the provision of balancing funds or fiscal decentralization had no effect on increasing government finances (Stone, 2015). The provision of insignificant balancing funds encourages PAD, this is also in line with research conducted by Budianto and Alexander in 2016 (Budianto & Sos, 2016).

In Cluster III, the first test in choosing the best model in panel data regression is to perform the Chow test to choose between the common effect model and the fixed effect model. The following is the hypothesis in the Chow test

H0 : 1 = 2 = . . . = i = (common effect model)

H1 : i j (fixed effect model)

Where is the resulting residual. Based on the chow test, the following results were obtained:

Tabel Hasil Uji Chow pada Kluster III

Effects Test	*Statistic*	*d.f.*	*Prob.*
(1)	(2)	(3)	(4)
Cross-section F	122.698732	(52,312)	0.00
Cross-section Chi-square	421.714305	52	0.00

Sumber: Data Diolah (2020).

Prob value. the p-value of the test in cross-section F and cross-section Chi-square is 0.00. The p-value which is less than 5 percent alpha indicates that at the 5 percent significance level, the resulting decision is to reject H0 so that it can be concluded that the fixed effect model is the best model. Next, perform a test to choose between the fixed effect model and the random effect model through the Hausman test. The hypothesis in the Hausman test is as follows:

H0 : E(uit | Xit) = 0 (random effect model)

H1 : E(uit |Xit) 0 (fixed effect model)

Hausman test results are displayed as follows:

Tabel Uji Hausman pada Kluster III

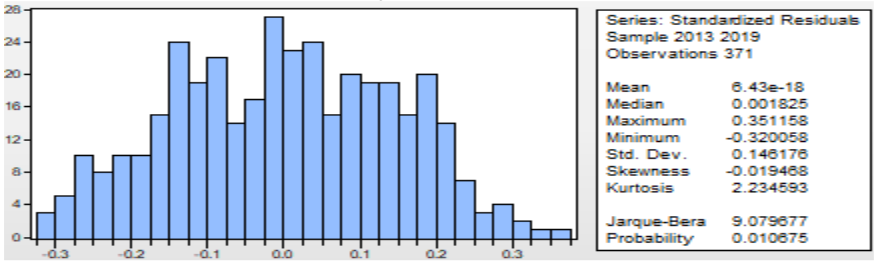
Test Summary	*Chi-Sq. Statistic*	*Chi-Sq. d.f.*	*Prob.*
(1)	(2)	(3)	(4)
Cross-section random	81.767680	6	0.00

Sumber: Data Diolah (2020).

The p-value of the Hausman test is 0.00, less than 5 percent, this indicates that the decision is to reject H0, so it can be concluded that the best model is the fixed effect model. Based on the results of the Chow test and Hausman test, the best model is the fixed effect model. After selecting the fixed effect model as the model that will estimate the parameters. Next is to test the classical assumptions to ensure that the resulting estimate is BLUE (Best Linear Unbiased Estimator) which includes normality test and multicollinearity test.

The estimation method in the fixed effect model uses the Generalized Least Square (GLS) method. The use of the GLS method causes the resulting model to be robust to the problems of heteroscedasticity and autocorrelation. The first test is to test the normality of the resulting residuals. The results of the normality test using the fallow jarque show that the resulting residuals are normally distributed at a significance level of 10 percent, where the resulting p-value is 0.0106.

Tabel Hasil Uji Normalitas di Kluster III



Sumber: Data Diolah (2020).

The estimation method used in the fixed effect model is Generalized Least Square (GLS) which is robust against heteroscedasticity and autocorrelation problems, so that the classical assumption tests carried out are normality tests and multicollinearity tests. The following are the results of the multicollinearity test on the independent variables in cluster III.

Tabel Uji Multikolinearitas pada Kluster III

	Coefficient	Centered
Variable	Variance	VIF
(1)	(2)	(3)
C	2.319944	
LOG(BL)	0.001171	3.599559
LOG(BTL)	0.002838	1.536114
LOG(DAPER)	0.000333	1.112213
LOG(PAJAK)	0.00128	3.972653
PDRB	7.41E-05	1.0931
LOG(RETRIBUSI)	0.000701	1.024803

Sumber: Data Diolah (2020).

All independent variables in the research model have a VIF value of less than 5, so it can be concluded that there is no relationship between independent variables in the model, so the non-multicollinearity assumption is fulfilled for the panel data regression model in cluster III.

IInterpretation of Panel Data Regression Model in Cluster III

To ensure that the selected model is a suitable model or fit, it is necessary to carry out simultaneous testing (F test) in the selected model. The magnitude of the F test is 159,405 with a p-value of 0.00. The p-value of less than 5 percent indicates that at the 5 percent significance

level, the resulting regression model is fit. The value of the coefficient of determination (R2) of 0.9673 indicates that all independent variables in the model are able to explain the diversity of the dependent variable by 96.73 percent.

Model Regresi Data Panel pada Kluster III

Variable	Coefficient	Std. Error	t-Statistic	Prob.
(1)	(2)	(3)	(4)	(5)
C	-7.189	1.523	-4.720	0.000
LOG(BL)	0.301	0.034	8.791	0.000
LOG(BTL)	0.360	0.053	6.758	0.000
LOG(DAPER)	-0.038	0.018	-2.070	0.039
LOG(PAJAK)	0.716	0.036	20.017	0.000
PDRB	-0.019	0.009	-2.211	0.028
LOG(RETRIBUSI)	-0.070	0.026	-2.628	0.009
Uji F	159.405			
Prob. Uji F	0.000			
R-Squared	0.9673			

Sumber: Data Diolah (2020).

In cluster III, all independent variables have a significant effect on the dependent variable (PAD growth) at a significance level of 5 percent. If there is a 1 percent increase in all independent variables in the model, then the largest increase in PAD growth is caused by tax growth, namely increasing PAD growth by 0.716 percent.

However, there are 3 variables that have a negative impact on the growth of PAD as a proxy for financial independence, namely the growth of balancing funds, GRDP growth, and retribution growth. If there is an increase of 1 percent in each of these independent variables, it will cause a decrease in PAD growth in districts/cities that fall into cluster III.

The sign of the coefficient of the effect of balancing funds on regional financial independence as a proxy for negative PAD growth indicates that the provision of balancing funds actually has an impact on decreasing regional financial independence. In other words, the provision of balancing funds encourages dependence on districts/cities in Cluster III. This is in line with the research conducted by Said (2019), the results of this study indicate that the provision of balancing funds has an impact on the dependence of local governments on balancing funds from the central government.

Furthermore, Arbani (2020) emphasized that every year the provision of balancing funds to regional governments should provide assistance so that regions with shortages can be helped. However, this actually has a negative impact, namely the dependence of the region on balancing funds in meeting regional revenues. This actually has the effect of deviating from the original goal of providing balancing funds so that local governments can be financially independent. The high degree of centralization in the taxation sector, and very low taxes received by the regions as well as the lack of role for regionally-owned enterprises have made the regions highly dependent on fiscal transfer funds from the central government every year.

In Cluster IV, the first test in choosing the best model in panel data regression is to perform the Chow test to choose between the common effect model and the fixed effect model. The following is the hypothesis in the Chow test

H0 : 1 = 2 = . . . = i = (common effect model)

H1 : i j (fixed effect model)

Where is the resulting residual. Based on the chow test, the following results were obtained:

Tabel Hasil Uji Chow pada Kluster IV

Effects Test	*Statistic*	*d.f.*	*Prob.*
(1)	(2)	(3)	(4)
Cross-section F	7.972643	(291,1746)	0.00
Cross-section Chi-square	1727.878752	291	0.00

Sumber: Data Diolah (2020).

Prob value. the p-value of the test in cross-section F and cross-section Chi-square is 0.00. The p-value which is less than 5 percent alpha indicates that at the 5 percent significance level, the resulting decision is to reject H0 so that it can be concluded that the fixed effect model

is the best model. Next, perform a test to choose between the fixed effect model and the random effect model through the Hausman test. The hypothesis in the Hausman test is as follows:
H0 : E(uit | Xit) = 0 (random effect model)
H1 : E(uit |Xit) 0 (fixed effect model)
Hausman test results are displayed as follows:

Tabel Uji Hausman pada Kluster IV

Test Summary	*Chi-Sq. Statistic*	*Chi-Sq. d.f.*	*Prob.*
(1)	(2)	(3)	(4)
Cross-section random	72.512756	6	0.00

Sumber: Data Diolah (2020).

The p-value of the Hausman test is 0.00, less than 5 percent, this indicates that the decision is to reject H0, so it can be concluded that the best model is the fixed effect model. Based on the results of the Chow test and Hausman test, the best model is the fixed effect model. After selecting the fixed effect model as the model that will estimate the parameters. Next is to test the classical assumptions to ensure that the resulting estimate is BLUE (Best Linear Unbiased Estimator) which includes normality test and multicollinearity test.

The estimation method in the fixed effect model uses the Generalized Least Square (GLS) method. The use of the GLS method causes the resulting model to be robust against heteroscedasticity and autocorrelation problems. The first test is to test the normality of the resulting residuals.

Normality test

The central limit theorem states that the sampling distribution curve for a sample size of 30 or more will have all the properties of a normal distribution. Based on the explanation in the theorem, the number of samples in cluster IV is 292 samples. Therefore, it can be said that the number of samples in cluster IV has met the requirements to meet the normality test.

Multicollinearity Test

The assumption of non-multicollinearity is one of the assumptions that requires that there is no relationship between independent variables in the research model. The measurement method is through comparison of the obtained VIF values. If the VIF value is less than 5, it can be said that there is no relationship between the independent variables in the model so that the multicollinearity assumption is met. The VIF value in table 23, shows that all VIF values for the independent variables in the model are less than 5, so it can be concluded that there is no multicollinearity in the research model.

Tabel Uji Multikolinearitas pada Kluster IV

	Coefficient	*Centered*
Variable	*Variance*	*VIF*
(1)	**(2)**	**(3)**
C	0.473688	
LOG(BL)	0.000303	2.519807
LOG(BTL)	0.000816	2.590688
LOG(DAPER)	7.54E-05	1.053739
LOG(PAJAK)	0.000153	2.896851
PDRB	5.04E-06	1.043912
LOG(RETRIBUSI)	5.85E-05	1.088574

Sumber: Data Diolah (2020).

In estimating the parameters in the research model, it is necessary to do an F test to find out whether the resulting model is suitable or not. The F test value of 237,132 with a p-value of 0.00 decided to reject H0 thus concluding that the resulting regression model was appropriate. The R2 value of 0.9758 indicates that all independent variables in the model are able to explain the diversity of the dependent variable by 97.58 percent.

Tabel Model Regresi Data Panel pada Kluster IV

Variable	Coefficient	Std. Error	t-Statistic	Prob.
(1)	(2)	(3)	(4)	(5)
C	-13.815	0.688	-20.073	0.000
LOG(BL)	0.401	0.017	23.014	0.000
LOG(BTL)	0.749	0.029	26.220	0.000
LOG(DAPER)	0.028	0.009	3.257	0.001
LOG(PAJAK)	0.303	0.012	24.523	0.000
PDRB	-0.009	0.002	-4.195	0.000
LOG(RETRIBUSI)	-0.009	0.008	-1.230	0.219
Uji F	237.132			
Prob. Uji F	0.000			
R-Squared	0.9758			

Sumber: Data Diolah (2020).

The levy growth variable has no significant effect at the 5 percent significance level, while other variables such as direct spending growth, indirect spending growth, balancing fund growth, and tax growth have a significant effect on PAD growth at a 5 percent significance level. If there is a 1 percent increase in direct growth, it will have an impact on an increase in PAD by 0.749 percent. The direct expenditure growth variable is the variable that has the greatest influence on the increase in PAD growth. In cluster IV, the growth of the balancing fund has a positive and significant effect on the growth of PAD, namely if there is a 1 percent increase in the balancing fund, it will cause a 0.028 percent increase in the growth of PAD.

The results of this study found that the effect of balancing funds on regional financial independence as a proxy for PAD growth was positive and significant for districts/cities in cluster IV. This means that every time there is an increase in the distribution of balancing funds, it can increase regional financial independence. The results of this study are in line with research conducted by several previous studies such as Falurida and Pratiwi (2017), Simanjuntak and Mukhlis (2016) and Suprantiningrum (2015) which state that the provision of balancing funds encourages regional financial independence.

Other variables that determine or affect regional financial independence based on panel data regression analysis for clusters I, II, III and IV are direct and indirect expenditure variables. Based on this, the management of district/city government expenditures in all data clusters must be directed to quality direct and indirect expenditures. Changes in the pattern of APBD management that are more rational and lead to productive investment can encourage regional financial independence and increase economic growth.

Comparative Analysis of Financial Independence between Clusters

The fiscal decentralization policy aims to minimize the fiscal gap and achieve equity among regencies/cities in Indonesia. During the implementation of the decentralization policy, inequality between districts/cities still persists. This problem is caused by the low source of district/city revenue for other areas. This happens in areas that do not have a massive economic center. The analysis of the effect of balancing funds on regional financial independence cannot be carried out simultaneously for all districts/cities. Therefore, it is necessary to divide each district/city in each cluster based on certain criteria, namely cluster I for areas receiving additional funds other than balancing funds, cluster II for areas with a ratio of PAD to balancing funds of more than 50%, cluster III for areas with the ratio of PAD to balancing funds is 25%-50%, and cluster IV is for areas with a ratio of PAD to balancing funds less than 25%.

The research model produced in each cluster gives different results in determining the factors that affect regional financial independence. The factors that encourage regional independence in cluster 1 are direct spending, indirect spending, taxes and levies and balancing funds. Direct and indirect spending is one of the government's responsibilities in regional autonomy. The effect of direct and indirect spending on financial independence, which is positive and significant, indicates that district/city spending priorities in cluster 1 are oriented towards the development of facilities and infrastructure so as to increase PAD as a proxy for regional independence. Local revenue in the form of taxes and levies has a positive impact on regional independence. This indicates that districts/cities located in cluster 1 have fiscal capacity that is able to support their regional needs, so that central government transfer funds

can be allocated to other regions that do not have district/city revenue potential.

Meanwhile in cluster II, the factors that influence regional financial independence are direct expenditures, indirect expenditures, and taxes. Cluster II is a district/city that has a ratio of PAD to balancing funds of more than 50%. Tax revenue is the main source of income in realizing development in the region, so that positive tax growth will increase regional independence in the cluster.

The factors that influence financial independence in clusters III and IV are the same, namely direct spending, indirect spending, balancing funds, taxes, GRDP, and user fees. Regencies/cities located in clusters III and IV have something in common, namely the ratio of PAD to balancing funds which is less than 50%. Regencies/cities in cluster III and IV areas must increase regional revenues through taxes and levies. In addition, an increase in regional spending, both directly and indirectly, can also stimulate the pace of the economy which has an impact on increasing regional income, thereby increasing the independence of the region.

The difference in the results found in each cluster is due to the different sources of regional revenue in each cluster. For clusters with regions with relatively high PAD, the provision of balancing funds does not affect financial independence, so they can be relocated to regions with low PAD, thereby spurring financial independence in the region. The results of this study are in line with research conducted by the Ministry of Finance Assistance Team for Fiscal Decentralization in 2012, which found that there is a need for reformulation of balancing funds to local governments. Local governments with large fiscal potential but small fiscal needs will receive relatively small balancing funds. On the other hand, local governments with small fiscal potential but large fiscal needs will receive relatively large balancing funds.

From the four clusters that have been formed in this study, it can be seen that the factors that influence financial independence are direct spending, indirect spending, and taxes. The increase in these three variables can be a stimulus in increasing regional financial independence. Improving the quality of local government spending, both direct and indirect, can encourage local government economic growth which can stimulate an increase in regional income. The increase in regional income can ultimately encourage regional financial independence.

CONCLUSION

The regional autonomy policy, which is accompanied by the provision of balancing funds, has a goal, one of which is to have an impact on the financial independence of regency/municipal governments in Indonesia. The results of this study found that the factors that significantly affect financial independence in Clusters I, III and IV are direct spending, indirect spending, taxes and balancing funds. Factors that affect financial independence in Cluster II are almost the same as in Clusters I, III, and IV, namely direct spending, indirect spending, and taxes. However, for district/city governments in cluster II, the balancing fund variable does not significantly affect regional financial independence.

The results of panel regression analysis on each research data cluster for districts/cities show differences in the effect of balancing funds on regional financial independence. Based on this, the policy strategy that must be issued is to reformulate the calculation of balancing funds given to local governments. At the same time, local governments must carry out a policy strategy for relocating local government spending to productive expenditures in the regional government budget.

Based on the results of this study, the central government together with the House of Representatives of the Republic of Indonesia (DPR RI) need to sit down together to have serious talks related to the reformulation of the calculation of the balancing fund. The reformulation of the calculation of the balancing fund is intended so that the role of the balancing fund as an equalization grant can play a more significant role in increasing regional financial independence.

Furthermore, district/city governments in all clusters need to formulate and allocate direct and indirect expenditures in the APBD. Expenditure relocation, either directly or

indirectly, must be directed to expenditures that are productive in nature in order to create an increase in the economy which in turn can spur increased regional financial independence in each district/city in all clusters.

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