REVENUE-SHARING FUND AND PERFORMANCE OF LOCAL GOVERNMENTS

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ABSTRACT
This study examines the relationship between revenue sharing funds and local government performance in Indonesia. The sample included 481 local governments in 2016. The results of this study provide the following empirical evidence. First, local governments that experience high (low) dependence on revenue sharing funds are local governments that achieve low (high) performance. Second, the increase in local government revenue-sharing funds has an impact on improving the performance of regional governments. Third, the negative relationship between dependence on revenue sharing funds and local government performance is more evident for local governments in the relatively low-performance group. Likewise, the relationship between increased revenue sharing and improved performance is stronger for local governments in the relatively low-performance group. These results suggest the role of performance levels in determining policy on revenue sharing funds and their relation to the performance of local government administration.

KEY WORDS
Revenue-sharing funds, performance, local government, region.

Revenue-sharing fund (RSF), or dana bagi hasil (DBH), is one of the sources of local/regional government funding sourced from the State Revenue and Expenditure Budget allocated to the regions based on a certain percentage number to fund regional needs in the context of implementation decentralization. An earlier study by Lewis (2013) suggested that fund transfers tended to stagnate at a low level and this had an impact on limited spending on infrastructure which in turn impeded economic growth. More recent data about DBH shows that the DBH generated by each local government varies due to, among others, the amount of tax and natural resources originating from the region of the relevant regional government. The realization of 2016 regional government budget data tabulated by the Ministry of Finance's Directorate General of Fiscal Balance shows the largest DBH received by a local government reached more than 60 percent of the total regional income, while the lowest DBH was less than 1 percent of the total regional income. The DBH aims to improve the vertical balance between the central and regional governments by taking into account the potential of producing regions (UU-23, 2014).

In the implementation of decentralization, the performance of implementing regional government is evaluated every year. The results of the performance evaluation in 2016, presented in the Minister of Home Affairs Decree Number 100-53 of 2018 on the Ranking and Status of the Local Government Administration Performance Nationally, show that the performance scores of local governments are very varied, in the range from a score of 1.0864 (lowest) to 3.5926 (highest) (Kepmendagri-100-53, 2018). These performance evaluations include several aspects, among others, aspects of regional financial management, the effectiveness of planning, drafting, aspects of business administration, accountability, and supervision of the Regional Budget, and aspects of transparency in allocation utilization, disbursement and absorption of revenue sharing funds (PP-6, 2008).

The purpose of this study is to examine whether there is an association between the revenue sharing fund and the performance of local government administration. Comparison of financial performance between municipalities needs to consider the comparable characteristics of local governments (Zafra-Gómez, López-Hernández, & Hernández-Bastida, 2009). This is in line with the findings of the following studies regarding the relationship between capital expenditure realization and performance that depends on the

level of performance (Sutopo & Siddi, 2018), and regarding the association between revenue sharing and performance that is influenced by regional expenditure classification (Saputra, Ardila, Siddi, & Sutopo, 2018).

This study extends previous studies on the relationship between revenue sharing funds and the performance of local governments. More specifically, this study aims to provide empirical evidence about how dependence on revenue sharing funds are associated with the performance of regional government administration, and about how the increase in revenue sharing funds is related to improving the performance of regional government administration. Furthermore, this study explores whether the relationship between revenue sharing funds and performance and the relationship between increasing revenue-sharing funds and improving performance is influenced by the level of performance or by the location of local governments.

LITERATURE REVIEW

Public finance theory shows that activities for the public interest and/or non-profit activities cannot be held by the market (Musgrave & Musgrave, 1989). As a result, public obligations that are not touched by the market are the government's obligation to provide them. In carrying out services to the community, the government requires funds from both the local area and from the central government. One source of regional revenue is revenue sharing, and one indicator of this success is the performance of local government administration.

This study examines the relationship between revenue sharing and performance from two different points of view. First, this study examines the relationship between dependence on revenue sharing and performance. Second, this study examines the relationship between changes in revenue-sharing funds and changes in performance. Each of them is more specifically described below.

The purpose of allocating revenue sharing funds from the central government to regional governments is to reduce inequality in financial capacity between the central and regional governments (UU-23, 2014). By receiving revenue sharing funds as a source of funding, local governments are expected to achieve high performance. Previous studies provide the following results. For example, tax sharing in China is highly stimulating in all forms of local spending and income-generating activities (Zhang, 2013). In Indonesia, revenue sharing has a positive and significant impact on economic performance on people's welfare (Lestari & Utama, 2019). Li, Li, Yu, & Chen (2017) suggested that equitable distribution of all types of public services can promote equality of welfare between regions.

This study examines the relationship between revenue sharing and performance from different points of view. Revenue sharing is needed by local governments, but high dependence on revenue sharing reflects risks. Receipt of large revenue shares by local governments but not accompanied by the ability to generate local revenue can negatively impact performance. Trussel & Patrick (2009) found that intergovernmental fund transfers affect fiscal distress. High transfer funds result in fiscal distress. In Croatia, heavy dependence on grants received by local government units is one of the main obstacles to the decentralization process (Alibegović, Slijepčević, & Kordej-De Villa, 2013). Besides, intergovernmental income is positively correlated with financial risk (Trussel & Patrick, 2016).

Revenue-sharing funds (RSF) are funds originating from certain revenues of the State Revenue and Expenditure Budget allocated to producing regions based on certain percentage figures to reduce the disparity in financial capacity between the central and regional governments. This revenue-sharing fund is a component of fiscal capacity in addition to regional own-source revenue. This fiscal capacity is part of the regional fiscal needs which are the funding needs of the region to carry out government affairs which become the authority of the region, both mandatory government affairs related to basic services and not related to basic services or selected government affairs (UU-23, 2014).

Every year, an evaluation of the performance of regional government administration (P) is carried out, which includes measuring the performance of government administration,

ranking, and determining the performance status of the provincial, regency, and city administration nationally. Performance evaluation at the level of regional policymakers including aspects of evaluating transparency in the use of allocations, disbursement and absorption of revenue-sharing funds, intensity, effectiveness, and transparency of collecting local revenue sources, and the effectiveness of planning, preparation, implementation of administration, accountability, and oversight of regional revenue and expenditure budgets. Performance evaluation at the level of implementing regional policies including aspects of regional financial management (PP-6, 2008). Revenue-sharing funds and local original revenues constitute fiscal capacity, but revenue-sharing funds are transfer income from the central government. A large revenue share relative to local own-source revenue indicates a large regional dependency on transfer revenue that reflects risk. This leads to the first hypothesis (H1) as follows. *"Local governments that have a high (low) dependency on revenue sharing funds tend to have low (high) performance*". In other words,"*dependence on revenue sharing funds is negatively related to local government performance*".

An increase (decrease) in revenue-sharing funds is not correlated with income dependence on revenue-sharing funds. Local governments that have increased revenue sharing can be local governments that achieve high or low performance. Likewise, local governments that experience a decrease in revenue sharing can be local governments that achieve high or low performance. Local governments need to increase revenue sharing to improve performance. An earlier study in Brazil by Caselli & Michaels (2013) found that oil-rich cities had increased incomes and reported a corresponding increase in spending on public goods and services, although this increase in income and expenditure did not have a significant impact on increasing social transfers, public goods, infrastructure, and household income. Kosec (2014) provides evidence that increasing public sector income in Brazil reduces private school enrollment.

The purpose of the revenue sharing fund is to reduce the inequality in fiscal capacity between the central and regional governments (UU-23, 2014). Thus, an increase in the revenue sharing fund of the regional government contributed to increasing the fiscal capacity of the local government. This increase in financial capacity increases the ability of local governments to provide services to the community. The quality of service to the community can be demonstrated by the performance of the local government administration. This leads to our second hypothesis (H2) as follows. "*Changes in revenue sharing funds are positively related to changes in performance*". In other words, "*local governments that have increased revenue sharing funds will achieve improved performance*".

The relationship between revenue sharing and performance will be contingent on several factors. The level of local government performance can be a contingent factor. Thus, this study examines the relationship between revenue sharing funds and performance and the relationship of changes in revenue sharing funds and performance changes for regional governments that have relatively low and relatively high-performance levels separately. Performance can be influenced, among others, by the quality of human resources. For example, public sector accounting reform is constrained by staff with inadequate accounting skills (McLeod & Harun, 2014; Yuliati, Yuliansyah, & Adelina, 2019). The findings of Sutopo & Siddi (2018) indicate that relatively low levels of performance can have different characteristics with relatively high levels of performance, and this has an impact on the relationship between performance determinants and performance. This leads to the second objective of providing empirical evidence for answers to the following two research questions. Research question 3: *How is the association between revenue-sharing and performance*?. Research question 4: *how is the change in revenue-sharing funds associated with the change in performance for high versus low levels of local government?*

Dependence on revenue sharing for a local government implies revenue risk for that local government. High (low) dependence on revenue sharing funds associated with low (high) performance. Revenue sharing fund (relative to locally generated revenue) is more needed for local governments that still have relatively low performance. Therefore, we predict that "*the association between revenue sharing and performance is higher for local*

governments that have relatively low performance compared to that for local governments that achieve relatively high performance" (H3).

Local governments need funds from both local sources (local revenue) and from central government transfer sources, including revenue-sharing funds, to finance regional government operations. An increase in revenue sharing funds is needed for local governments that have relatively low performance. The increase in funds is expected to improve the performance of local governments. This leads to the 4th hypothesis (H4): "*The association between increased revenue sharing and improved performance is higher for local governments that have relatively low performance compared to that for local governments that achieve relatively high performance*".

METHODS OF RESEARCH

To test the association between revenue sharing funds and performance, the following regression equations *are* used.

$$P = \beta_0 + \beta_1 RSF + \varepsilon \qquad \text{1.a.}$$

$$P = \beta_0 + \beta_1 RSF + \beta_2 SIZE + \beta_3 AGE + \beta_4 OPINION + \beta_n \sum_{n=1}^{3}(TYPE) + \varepsilon \qquad \text{1.b.}$$

$$PC = \beta_0 + \beta_1 RSFC + \varepsilon \qquad \text{2.a.}$$

$$PC = \beta_0 + \beta_1 RSFC + \beta_2 SIZE + \beta_3 AGE + \beta_4 OPINION + \beta_n \sum_{n=1}^{3}(TYPE) + \varepsilon \qquad \text{2.b.}$$

Where:
- P (Performance) – a score on the performance of local government administration stipulated in the Decree of the Minister of Home Affairs with a range of scores from 0 to 4;
- PC (Performance Change) – the current year's performance score minus the previous year's performance score;
- RSF (Dependence on Revenue Sharing Fund) – the revenue sharing fund in Indonesian rupiah (IDR) divided by locally-generated revenue in IDR;
- RSFC (Revenue Sharing Fund Change) – a change in revenue sharing fund in IDR or current year's revenue-sharing fund minus revenue sharing fund in the previous year;
- SIZE – the size of the local government that is measured by the natural logarithm of the total revenues;
- AGE – age of the local government which is the number of years from the year the local government was formed until the year of observation (2016);
- OPINION – a dummy variable given a value of 1 if the audit opinion from The Audit Board of the Republic of Indonesia is "unqualified opinion", and 0 otherwise;
- TYPE – The type of local government that includes city government, regency government, and provincial government. The dummy variable is used to measure each type of local government.
- CITY – a dummy variable given a value of 1 if the local government is a city government, and 0 otherwise;
- REGENCY – a dummy variable given a value of 1 if the local government is the regency government, and 0 otherwise;
- PROV – a dummy variable given a value of 1 if the local government is a provincial government, and 0 otherwise.

Regression analyses are applied to the following sample and subsample to test the hypotheses.
- Regression analyses applied to the full sample are used to test the first and second hypotheses (H1 and H2);

- Regression analyses applied to the subsamples based on the relative performance level are used to test the third and fourth hypotheses (H3 and H4). The subsamples based on the level of relative performance include (1) a subsample of local governments that have relatively low-performance levels (performance scores are less than or equal 3) and (2) a subsample of local governments that have relatively high-performance levels (performance scores are greater than 3).

Data on the performance of local government administration is obtained from the Decree of the Minister of Home Affairs Number 100-53 of 2018 (Kepmendagri-100-53, 2018) on the Ranking and Status of the Performance of Regional Government Administration Nationally in 2016 and the Decree of the Minister of Home Affairs Number 120-10421 of 2016 (Kepmendagri-120-10421, 2016). The decree was accessed from the website of the Directorate General of Regional Autonomy of the Republic of Indonesia. The source of the revenue sharing data (DBH) is the realization of 2015 and 2016 regional government budget data tabulated by the Ministry of Finance's Directorate General of Fiscal Balance (Direktorat Jenderal Perimbangan Keuangan, DJPK). The data was accessed from the DJPK website.

The initial sample included 548 local government observations. After deducting 67 missing data, the final full sample was 481 observations of the local government. Further, the number of observations is grouped by performance level into two subsamples: a subsample of a relatively lower performance level and a subsample of a relatively higher performance level. Table 1 presents the sample and the subsamples of local governments.

Table 1 – Sample and Subsample

Sample and subsample	Observations	
Initial sample		548
Missing data		67
Final sample		481
Subsample based on the level of performance:		
A relatively low-level performance	237	
A relatively high-level performance	244	
		481
Local governments by the type:		
Province	29	
City	85	
Regency	367	
		481

RESULTS AND DISCUSSION

The descriptive statistics presented in Table 2 show that the mean value of performance (P) is 2.94. This mean value is included in the relatively low-performance group. The range of performance values (P) is from 1.09 (minimum) to 3.59 (maximum). The minimum value of the performance is greater than the normative minimum value (0) while the maximum value of the performance is smaller than the normative maximum value (4) according to regulations related to performance.

The mean value of changes in performance (P) is 0.12, which indicates that the average local government achieved an increase in performance even though there were local governments that experienced a decrease in performance as indicated by the minimum mean value of -0.55.

Dependence on revenue sharing funds (RSF) has a mean value of 1.11, which means that revenue sharing funds are 111 percent of regional own-source revenue. The range of RSF values is from 0.02 to 26.42. This indicates that there is a local government that has a low dependency on revenue sharing funds but there is also a local government that has a very high dependency on revenue sharing funds.

On average, local governments experience changes in revenue sharing funds (RSFC) or an increase of IDR 7.55 billion. However, not all local governments have increased revenue sharing funds. The lowest change in revenue sharing funds was a decrease of IDR -

486.78 billion, while the highest change was an increase in revenue sharing funds of IDR 593.78 billion.

Table 2 – Descriptive Statistics - Full Sample (N = 481)

Variable	Mean	Median	Std. Deviation	Minimum	Maximum
P	2.94	3.00	0.38	1.09	3.59
PC	0.12	0.09	0.24	-0.55	1.79
RSF	1.11	0.40	2.09	0.02	26.42
RSFC	7.55	3.76	66.45	-486.78	593.90
R	1739.21	1208.27	2229.57	510.24	27694.04
SIZE	7.22	7.10	0.58	6.23	10.23
AGE	40.28	57.00	23.38	8.00	66.00
OPINION	0.72	1.00	0.45	0.00	1.00

Table 3 presents descriptive statistics by performance level. Dependence on local government revenue-sharing funds in the relatively low-performance group is higher (mean value is 1.35) compared to that in the relatively high-performance group (mean value 0.89). This indicates that, on average, local governments in the relatively low-performance group use revenue-sharing funds of 135 percent of locally-generated revenues, whereas local governments in the relatively high-performance group use revenue-sharing funds at 89 percent of locally-generated revenues. These results are consistent with the prediction that the negative relationship between dependence on revenue sharing funds and performance for local governments in the relatively low-performance group is stronger than that for local governments in the relatively high-performance group.

In contrast to these results, the average change in local government revenue-sharing funds (RSFC) for the relatively low-performance group (the mean value of the increase in revenue sharing is IDR 1.46 billion) is smaller than that for the relatively high-performance group (the mean value is IDR 13.46 billion). However, the change in performance (PC) of the local government for the relatively low-performance group is even higher (the mean value of the change in performance is 0.13) compared to that for the relatively high-performance group (the mean value is 0.10). These results can support the prediction that the relationship between increased revenue sharing and improved local government performance is stronger for the relatively low-performance group.

Descriptive statistics for control variables show a comparison of characteristics between the two groups of local governments by performance level. Local governments in the relatively low-performance group have smaller sizes, as newer local governments, and achieve fewer "unqualified audit opinions" compared to that of the relatively high-performance group.

Table 3 – Descriptive Statistics by the Level of Performance

Variable	Mean	Median	Std. Deviation	Minimum	Maximum
Panel A: (Subsample of the relatively low level of performance, N = 244)					
P	2.67	2.78	0.36	1.09	3.00
PC	0.13	0.08	0.32	-0.55	1.79
RSF	1.35	0.47	2.60	0.08	26.42
RSFC	1.46	2.32	48.82	-239.77	393.86
R	1406.49	1084.07	1205.63	513.19	12364.56
SIZE	7.09	6.99	0.48	6.24	9.42
AGE	30.81	17.00	21.37	8.00	66.00
OPINION	0.56	1.00	0.50	0.00	1.00
Panel B: (Subsample of the relatively high level of performance, N = 237)					
P	3.20	3.18	0.15	3.00	3.59
PC	0.10	0.09	0.13	-0.16	0.96
RSF	0.89	0.36	1.39	0.02	10.01
RSFC	13.46	6.95	79.61	-486.78	593.90
R	2062.40	1448.65	2862.64	510.24	27694.04
SIZE	7.35	7.28	0.63	6.23	10.23
AGE	49.48	58.00	21.53	8.00	66.00
OPINION	0.87	1.00	0.33	0.00	1.00

The following regression results are presented in three groups consisting of regression results for (1) Full Sample (481 Observations) and (2) Subsample of Low and High Level of Performance. The results and discussion of each group are presented as follows.

The regression results using a full sample (481 observations) are presented in Table 4. The F-statistics in Panel A (Model 1a and Model 1b) are significant at the 1 percent level. F-statistics in Panel B (Model 2a and Model 2b) are also significant but at the 5 percent level. These results indicate that the models can be used to interpret the association between dependence on revenue sharing and performance funds and the association between changes in revenue sharing funds and changes in performance. The adjusted R-squared in Panel A for Model 1a is 0.07 and increases to 0.36 for Model 1b which means that the control variables contribute in explaining performance as the dependent variable. However, the Adjusted R-squared in Panel B for Model 2a is 0.018 (rounded to 0.02) and decreases to 0.017 (rounded to 0.02) for Model 2b. These results indicate that control variables do not contribute to explaining performance as the dependent variable.

The regression results in Panel A Model 1a show the RSF regression coefficient (dependence on revenue sharing funds) is -0.05 significant at the 1 percent level. The regression results of Model 1b (with the addition of control variables) show that the RSF regression coefficient is -0.04 also significant at the 1 percent level.. These results support the first hypothesis (H1) that there is a negative association between dependence on revenue sharing funds and performance. Local governments that have high (low) dependence on revenue sharing funds tend to achieve low (high) performance. Dependence on revenue-sharing funds as measured by the ratio of revenue-sharing funds to locally-generated revenues reflects the risk of using revenue-sharing funds. The higher the dependency on revenue sharing, the higher the risk of local government revenue. In turn, this revenue risk has an impact on local government performance. Local governments that experience high a risk of revenue sharing funds, or that have a high dependency on revenue sharing funds, tend to achieve low performance and vice versa.

Table 4 – Regression Results (Full Sample, 481 Observations)

Variable	Coefficient	Prob.	Coefficient	Prob.
Panel A: The association between Dependence on Revenue Sharing Fund and Performance (P)				
	Model 1a		Model 1b	
RSF	-0.05	0.00	-0.04	0.00
SIZE			0.07	0.01
AGE			0.01	0.00
OPINION			0.27	0.00
CITY			0.14	0.00
PROV			-0.23	0.00
C	2.99	0.00	2.09	0.00
R-squared	0.07		0.36	
Adjusted R-squared	0.07		0.36	
F-statistic	35.54		45.29	
Prob(F-statistic)	.000		.000	
Panel B: The association between Change in Revenue Sharing Fund and Change in Performance (PC)				
	Model 2a		Model 2b	
RSFC	0.00	0.00	0.00	0.00
SIZE			0.00	0.90
AGE			0.00	0.45
OPINION			-0.04	0.11
CITY			0.03	0.28
PROV			0.03	0.60
C	0.11	0.00	0.13	0.37
R-squared	0.02		0.03	
Adjusted R-squared	0.02		0.02	
F-statistic	9.55		2.37	
Prob(F-statistic)	.002		.029	

Table 4 Panel B presents the regression results to test the association between changes in revenue sharing (RSFC) and changes in performance (PC). The change in

revenue sharing funds which is the difference between the revenue sharing funds (in IDR billion) of the current year and that of the previous year does not correlate with the dependency of the revenue sharing funds as measured by the ratio of revenue sharing funds to locally-generated revenue). Local governments that experience an increase in revenue sharing funds can be local governments that have a high or low dependency on revenue sharing funds. The regression results in Panel B show that the regression coefficient for change in revenue sharing (RFSC) is 0.00052 (rounded to 0.00) for Model 2a and 0.00051 (rounded to 0.00) for Model 2b. These results support hypothesis 2 (H2) that changes in revenue sharing are positively associated with changes in performance. Local governments that have experienced large increases in revenue sharing tend to achieve performance improvements. Revenue sharing is one source of revenue needed by local governments to finance local government service activities to the community. Therefore, an increase in revenue sharing contributes to improving the performance of regional government administration.

Table 5 – Regression Results ror the Subsamples of the Relatively Low and Relatively High Level of Performance

Variable	Coef.	Sig.	Coef.	Sig.	Coef.	Sig.	Coef.	Sig.
	Relatively Low Performance (N=237)				Relatively High Performance (N=244)			
Panel A: The Association between Dependence on Revenue Sharing Fund (RSF) and Performance (P)								
	Model 1a		Model 1b		Model 1a		Model 1b	
RSF	-0.04	0.00	-0.04	0.00	-0.02	0.01	-0.02	0.02
SIZE			0.01	0.84			0.03	0.02
AGE			0.00	0.03			0.00	0.00
OPINION			0.18	0.00			0.06	0.03
CITY			0.21	0.00			0.03	0.14
PROV			-0.07	0.42			-0.11	0.02
C	2.72	0.00	2.47	0.00	3.22	0.00	2.82	0.00
R-squared	0.08		0.21		0.03		0.16	
Adjusted R-squared	0.08		0.19		0.02		0.14	
F-statistic	20.53		9.95		7.12		7.79	
Prob(F-statistic)	0.00		0.00		0.01		0.00	
Panel B: The association between Change in Revenue Sharing Fund and Change in Performance (PC)								
	Model 2a		Model 2b		Model 2a		Model 2b	
RSFC	0.00	0.00	0.00	0.00	0.00	0.93	0.00	0.86
SIZE			0.06	0.19			0.00	0.91
AGE			0.00	0.24			0.00	0.01
OPINION			-0.07	0.10			0.02	0.53
CITY			0.01	0.91			0.05	0.01
PROV			0.00	0.99			0.05	0.29
C	0.13	0.00	-0.26	0.38	0.10	0.00	0.14	0.20
R-squared	0.10		0.12		0.00		0.07	
Adjusted R-squared	0.09		0.10		0.00		0.05	
F-statistic	25.00		5.17		0.01		2.97	
Prob(F-statistic)	0.00		0.00		0.93		0.01	

Table 5 presents the regression results by performance level. Table 5 Panel A shows the regression results to test the association between dependence on revenue sharing (RSF) and performance (P) for the low-performance group and the high-performance group. The results for the low-performance group show that the regression coefficient of dependency on revenue sharing (RSF) is negative -0.039 (rounded to -0.04) for Model 1a (without control variables) and increased to -0.041 (rounded to -0.04) for Model 1b (rounded to with control variables), each is significant at the 1 percent level and Adjusted R-squared increased from 0.08 to 0.19. For the high-performance group, the regression coefficient of dependence on revenue sharing (RSF) is negative -0.018 (rounded to -0.02) for Model 1a (without control variables) and increases to -0.015 (rounded to -0.02) for Model 1b (with variables control) and Adjusted R-squared increased from 0.02 to 0.14. These results support the third hypothesis (H3) that the negative association between dependence on revenue sharing

funds and performance is more pronounced for the low-performance group compared to that for the high-performance group.

Table 5 Panel B presents the regression results to test the association between changes in revenue sharing (RSFC) and changes in performance (PC) for the low-performance group and the high-performance group. The results for the low-performance group show that the RSFC regression coefficient is negative 0.002018 (rounded to 0.00) for Model 1a (without control variables) and increased to 0.002029 (rounded to 0.00) for Model 1b (with control variables), each of which is significant at 1 percent level and Adjusted R-squared increased from 0.09 to 0.10. For the high-performance group, the regression coefficient of dependence on revenue sharing (RSF) is negative -0.000009 (rounded to -0.02) for Model 1a (without control variables) and 0.000021 (rounded to 0.02) for Model 1b (with control variables), but the coefficients are insignificant. These results indicate that a positive association between the increase in revenue sharing funds and performance improvement only occurs when the level of performance is relatively low (supporting H4). This finding suggests that increasing revenue sharing to improve performance is more necessary for local governments if these local governments achieve performance at a relatively low level of performance.

CONCLUSION

This study presents the following empirical findings. First, dependence on revenue sharing is negatively associated with performance. Dependence on revenue sharing funds is measured by the ratio of revenue sharing funds to regional own-source revenues. Revenue sharing includes regional income sourced from central government transfers to reduce the disparity in financial capacity between the central government and regional governments. However, reliance on revenue sharing funds indicates the risk of local government revenue. The findings of this study that show a negative association between dependence on revenue sharing funds and performance implies that local governments that have a high (low) dependency on revenue sharing funds have low (high) income risk, which in turn achieves low (high) performance.

Second, changes in revenue sharing funds are positively associated with performance. Thus, increasing revenue sharing funds can improve the performance of local governments. Changes in revenue sharing funds are current revenue-sharing funds reduced by the previous year's revenue-sharing funds, all in Indonesian Rupiah (IDR). Changes in revenue sharing funds are not correlated with dependence on revenue-sharing funds because each uses a different measurement and different meaning. Local governments need funds from both local sources (locally-generated revenues) and from central government transfer sources including revenue-sharing funds to finance regional government operations. The results of this study that show a positive association between changes in revenue-sharing funds and changes in performance means that local governments with high increases in revenue-sharing funds tend to succeed in achieving high-performance improvements, and vice versa.

Third, empirical results show that the negative relationship between dependence on revenue sharing and performance is stronger for local governments in the relatively low-performance group compared to that for local governments in the relatively high-performance group. Descriptive statistics show that local governments that achieve relatively low performance have a higher dependency on revenue sharing funds compared to local governments that have relatively high performance. This seems to have an impact on that the negative association between dependence on revenue sharing and performance is more evident for local governments in the relatively low-performance group. Besides, this study also found that the positive association between changes in revenue-sharing funds and changes in performance was stronger for local governments in the relatively low-performance group. This result is in line with descriptive statistics which show that the change in revenue sharing for local governments in the relatively low-performance group is lower than that in the relatively high-performance group, but contrary to that the change in

performance for local governments in the relatively low-performance group is higher compared to that in the relatively high-performance group. This in turn has an impact on that the positive association between changes in revenue sharing and changes in performance is more evident for local governments in the relatively low-performance group. The association only occurs for local governments in the relatively low-performance group.

These empirical findings suggest that local governments experiencing high dependency on revenue sharing funds need to be reduced over time. Besides, an increase in revenue-sharing funds is needed by regional governments that are included in the relatively low-performance group. The decrease in dependency on revenue-sharing funds and the increase in revenue-sharing funds implies the need to increase regional own-source revenue relative to revenue-sharing funds. The high increase in revenue sharing funds accompanied by low dependence on revenue sharing funds characterizes local governments that are classified as relatively high-performance group.

This study has limitations that need to be considered in interpreting the results. First, a relatively high level of performance is determined based on a performance score higher than 3, while a relatively low level of local government performance is based on a score lower than or equal to 3. Determining the level of performance on a different basis can affect the results. However, the determination of the level of performance was chosen given that the number of observations between the two groups of performance levels was only slightly different. Local governments in the relatively high-performance group are local governments that have performance scores equal to or greater than the median of performance scores. Second, the association between the revenue-sharing fund and local government performance based on regions was not analyzed in more detail for example based on relatively high and relatively low levels of performance. Besides, the type of local government is only used as a controlling variable but is not used to analyze the relationship between revenue-sharing funds and performance. This might give more explanation about the relationship between the two variables studied. However, this is done considering the limited number of observations. Future studies can be carried out by using variations in determining the level of performance.

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