Inclusive Economic Development Determinants in Indonesia: Comparing Governance and non-Governance Factors

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Abstract. This study investigates governance and non-governance variables impact on inclusive economic development (IDE) over provinces in Indonesia. We examine whether the fiscal autonomy index (revealing the ability of local governments (at the district levels, averaged) in "generating" local-owned source revenue (or *Pendapatan Asli Daerah* (PAD)) plays a vital role compared to those non-governance aspects. We use 30 provinces during the 2012-2021 period and employ the Fixed Effect (FE) and Random Effect (RE) estimators, along with the FE approach with lags for all independent variables. Our findings support the hypothesis that the governance's effect strongly contributes to inclusive development. For robustness check, we retest our model using both panel-corrected standard error (PCSE) and the Driscoll and Kraay methods to deal with cross-sectional dependence. The estimates obtained using these two latter approaches complement FE and RE results. We conclude inclusive development in the province is sensitive to improvement in local governance.

Keywords: inclusive development; governance; fiscal autonomy; province; Indonesia

1 Introduction

Sustainable development has become a global issue today considered in both developed and developing countries. The United Nations (UN) describes six main challenges facing the world in accordance with the goals set to achieve this new path of development style, namely to fight poverty, inequality, climate change, and environmental degradation, and also to foster peace, and justice issues.

In supporting and adapting this global concept, Indonesia's government through the National Development and Planning Board (*Bappenas*) creates and publishes an inclusive economic development index (IDEI). This index encompasses three pillars, namely: Pillar 1 (Economic Growth and Development), Pillar 2 (Equity and Poverty Reduction), and Pillar 3 (Expanding

Access and Opportunities). The purpose of measuring this index is to provide an overview of the level of inclusiveness of economic development based on the implementation of providing access and opportunities for all groups in an equitable manner, improving welfare, and reducing inequality between groups and regions.

This study investigates determinants that potentially affect inclusive development progress in Indonesia by emphasizing on the impact of the governance variable and non-governance dimensions captured by some macro and socioeconomic variables. As developing countries often face with poor development quality, answering whether policy should be emphasizing on governance or non-governance dimensions has important implication for focusing a key development strategy to accelerate inclusiveness in development itself. A number of studies have discussed and tested inclusive development using cross-country data, while regional-level data seemed to be less explored. This study fills this gap by offering cross-regional Indonesia's case. The country has decentralized political system since 2001 and it became effective in 2010 onwards, making this setting as a good experimental way to observe local governance's influence on local inclusiveness. While the governance indicator is our focus, we include some control variables encompassing dimensions of social, economic, democratic climate, business climate, and environment.

The paper proceeds as follows. Section 2 reviews the literature based on empirical studies associated. Research method is discussed in section 3, describing data used, measurements of variables, and estimation method. Section 4 highlights results and discusses the finding. The final section concludes.

2 Literature Review

Economic growth generated by market signals, based on the paradigm of neoliberal capitalism, has often attracted criticism as it may have triggered high incidents of poverty and inequality. Study by [8] has descriptively emphasized government policies that promote pro-poor growth. Providing public goods and social protection needed by the community and produce good quality institutions have also been recognized as pre-conditions for inclusive and equitable development. [8] underlined the importance of governance and institutions in shaping the consensus of the new development model. Similarly, [12] has also observed this case using Zambia as a study case, where a weak quality of government effectiveness led to market failure and hindered the achievement of inclusive economic growth. Inclusive growth had attributes reflecting poverty reduction, productive workforce, and elements of income redistribution. In addition, inclusive economic growth is also reflected in both the growth of workers and their productivity growth [12].

More definitively, [10] conceptualize a meaning of inclusive development. Outcomes in development that improve quality of marginalized communities were seen as the essence of inclusiveness in development, along with aspects of the sustainability of human, social, and environmental resources. To achieve these goals, inclusive institutional governance is needed which weights attention more in social justice (better capturing the basic needs in their community) [10].

A review in a similar opinion is also discussed in [7], that recommended institutional factors as

a condition for strengthening development inclusive quality. Similar study by [13] also examined the significance of the role of institutions using the principles outlined in the Washington Consensus and its "additional dimensions" such as fiscal discipline, corporate governance, and anti-corruption. The role of institutions in economy has also been discussed by [1] which distinguished institutions as inclusive or extractive. [1] underlined that inclusive governance tended to bring strong economic growth, rather than an extractive style institutions. This institutional inclusiveness is reflected in good quality regulations and public services, and policies that are able to generate incentives to attract investment and innovation in many sectors. All of them are some necessary conditions in acquiring inclusive economic development. Meanwhile, [7] allocated more weight to public participation which acted as a pre-condition for inclusive development. Public activity was supported by a democratic climate as reflected in the dimensions including political rights, civic liberties and voice and accountability. Empirical research by [16] also found a link between democracy and inclusive development mediated by social policies with a sample of selected countries in the Southeast Asia based on PLS-SEM analysis.

Empirical research on the inclusive development is now being the monitored subject as elaborated by, for instance, [10] and [17] who both conducted studies using global environment setting, [6] for Russia. In Africa's case, [5] found a moderating effect from institutional governance on environmental degradation which has a negative effect on inclusive development. Relevant result was also revealed by [4] where structural transformation is not the main key factor of inclusive development (measured by poverty reduction). Government policies that promote social services, increase productivity in the agricultural sector, minimize gender and ethnic inequalities, and strengthen social protection, these are the keys to inclusive development. Meanwhile, a study from [14] using a panel data approach combined with logit and multinomial logit estimations, finds the effects of human resources, trade openness and the employment sector as determinants for growth inclusiveness.

In the case of ASEAN, the empirical study of [2] using panel data approach found a positive effect of Foreign Direct Investment (FDI) and productivity growth on inclusive growth and growth in income per capita. The aspect of digitalization has also, as expectedly, a positive impact on inclusive growth in ASEAN, although only found significant at the 10% level. The ratio of credit to GDP in this study, though was positive in the sign, does not lead to a statistical meaningful impact. For the case of Indonesia, a study by [15] has examined the effect of governance using sample of 243 districts in Indonesia on the quality of economic growth. The results show less strong evidence to support that the quality of local governance plays a beneficial role for income growth per capita. This study implied that variation in local income growth per capita is mainly determined by the size of the economy and the wealth of natural resources. However, this study did not specifically explore the inclusive development indicator. The discussions of studies shown above have revealed that most investigations were held based on cross-country data and very little attentions have empirically investigated cases considering regional level.

3 Research Method

This study uses a quantitative approach and relies on secondary data sourced from official

government documentation (Bappenas, the Central Bureau of Statistics and BPK). We also use the database from INDODAPOER World Bank, for controls. The scope of the research focuses on the data at the provincial level in Indonesia from 2012 to 2019 period. We use a sample that consists of provinces in Indonesia excluding DKI Jakarta, the Special Region of Yogyakarta and Papua, due to the unavailability of main variable used in the model (i.e. incompleteness data on several non-governance variables).

Since the aim of the study is to estimate the effect of the independent variable on the dependent variable, we perform an econometric model based on static panel data. Empirically the model used is expressed as below:

DevInc
$$pt = \gamma \text{ GOVT } pt + X' \delta pt + \alpha p + e pt$$
 (1)

Where *DevInc* pt reflects inclusive development economic index (IDEI) which is publicly accessed from Bappenas (available at *http://inklusif.bappenas.go.id/index*) at the province p in the year t. This index is transformed to the natural logarithm form to capture the percentage effect when interpreting the estimations resulted. Our main of interest is $GOVT_{pt}$, which is the key independent variable that highlights the effect of local governance (at province level) on IDEI. To measure governance variable, we use fiscal autonomy index released by Financial Investigation Board.

This index, technically, calculates the ability of local governments (at the district levels, averaged) at the provincial level in "controlling" and "generating" local-owned source revenue (or *Pendapatan Asli Daerah* (PAD) in Bahasa). It implies that the higher the proportion of PAD achieved reflects the better quality of local governance be. This assumption also supports aspects that promote fiscal capacity and corporate governance which have played important dimensions for institutions [13]. The parameter estimated by this regressor is γ . As we use longitudinal data, in Equation (1) above, we include fixed-effects by incorporating province dummies (*province fixed effects*) captured by the parameter α_{p} . We, however, do not consider time dummies and trend in Equation (1) as the period used in our model is short in period (nine years). Finally, control variables are included by the vector X' which represent *non-governance* regressors with parameter δ_{pt} .

Non-governance variables are included as controls in our model. Among them, the population quality aspect is implied using three variables, namely: the proportion of the population 10 years and above who have completed higher education (diploma as minimum attainment) [HIGHEDUC] following [12]. Furthermore, population growth [GRTPop] and per capita protein consumption [ProtConsPercap] are included to reflect human capital variable. For social and political institutional aspects, we include the Indonesian Democracy Index [IDI] variable referring to [7] and [16]. The proportion of households that have access to business credit from the government [HHCcredit] is also used to capture example of pro-poor growth policies [2]. Finally, we also include foreign capital [FDI] and domestic capital inflows [PMDN], these two latter measures are converted to a natural logarithmic form, representing business climate. These represent the elements of globalization which oftenly acts as determinant for inclusive growth ([2], [3], [14]). All variables involved are measured at the province *i* for the year of *t*. In total, the number of cross sections (provinces) included in the model is 30 and the number of years is 9. As consequence, our panel data have a higher number of cross section identifier than the time dimension (N > T).

The panel data analysis used is static by first comparing the results of the regression based on fixed effects (incorporating a provincial dummy) and random effects. Both models use a robust standard error approach to anticipate heteroscedasticity issues that possibly emerge in panel data. Due to the assumption that variations in the current state may have been influenced by other variables in the previous time periods, our model in equation (1) is also analyzed by including the element of *lag-1* for all regressors. The estimation strategy then follows this expression:

DevInc
$$pt = \gamma \text{ GOVT } pt-1 + X' \delta pt-1 + \alpha p + e pt-1$$
 (2)

According to [18], when N > T, no estimator dominated. However, referring to [18], our panel data analysis also considers estimates using the Panel-Corrected Standard Error (PCSE) approach, for a robustness purpose. The PCSE estimation assumes that the error is heteroscedastic and correlates with the group panel. In this estimation we use first-order autocorrelation (AR(1)) in all panels, for the sake of estimation consistency. For another robustness test, we apply the Driscoll & Kraay panel data model approach using the estimator introduced by [11] with fixed effects. This model assumes the error structure in the estimation of the panel data to be heteroscedastic, serially correlated at a certain lag, and correlated between groups (between groups) in the data panel. Furthermore, due to the possibility that the case of cross-sectional dependence may appear in our panel data, we consider this model to be used.

4 Results and Discussion

The summary of statistical results is presented in Table 1, showing the average value of the inclusive economic development index is centered around 1.6 (in logs) where the maximum number is 1.9. The quality of government institutions as measured by the fiscal independence index (GOVT) has an average centered around 0.102, with a maximum value of 0.329. This figure also means that the average fiscal autonomy in each province (which represents the average of all districts belong) was still around one-third from the maximum value. The proportion of the population attaining tertiary education is 7.4 percent on average, with a population rate approximately grows by 1.5 percent per year. People with better access to business credit are also concentrated by 13.65 percent enjoying the facility, which is still far from the maximum figure of about 35.61 percent.

Variable	Ν	mean	sd	min	max
DevInc	240	1.681	0.109	1.351	1.915
GOVT	239	0.102	0.0608	0.0273	0.329
HIGHEDUC (%)	240	7.480	1.797	3.625	13.02
GRTPop (%)	240	1.573	0.551	0.560	3.170
ProtConsPercap (%)	240	55.56	5.182	43.17	74.29
IDI	240	70.75	6.455	52.61	83.94
Hhcredit (%)	240	13.65	7.038	3.400	35.61
Log FDI	240	5.610	1.692	-1.609	8.871

Table 1. Summary of Statistics

Log PMDN	238	4.240	1.741	0	8.572
Number of groups	30	30	30	30	30

Source: author's calculation

We also provide visual graphic on the relationship between inclusive development and the fiscal independence index, shown in Figure 1. We average the values of $DevInc_{pt}$ and $GOVT_{pt}$ to obtain cross-sectional data within 30 provinces in Indonesia, and the visualized scatter graph portrays a positive pattern of correlation between the two related indicators. The statistical correlation value is 0.592, statistically significant at the 99% confidence level.

Furthermore, we present our main results based on panel data regression by comparing the Fixed-Effect (FE) (Table 2) and Random-Effect (RE) estimators (Table 3), both using robust standard errors and autocorrelation. In each table, we show eight specifications of the estimation results with the inclusion of control variables represented by each column ((1)-(8)) to test the consistency of our estimates for the key independent variable, $GOVT_{pt}$ towards inclusive development. The results in Table 2 find strong indications of a consistent estimate for governance indicator on the inclusive development index. The GOVT coefficient has consistently a positive sign and is found statistically significant at the 1% level in all columns. This signals that quality of government institutions, as a proxy for potential fiscal independence, is an important determinant for the progress of inclusive development in Indonesia, using province-level data. Considering the example of model (8), for example, an increase in the share of the fiscal independence index by a percentage point index (i.e. from an average of 0.102 + 1% = 0.103) may lead to the inclusive development index increase by 0.805 percent, other factors are held constant.



Fig. 1. Correlation between fiscal autonomy index and inclusive development index Source: author's calculation

In Table 2, GOVT has the largest coefficients compared to the non-governance control

variables. Sequentially, for example in columns (7) and (8), government fiscal autonomy contributes the higher in terms of its magnitude of its coefficients, followed by population growth, domestic investment, the proportion of people with higher education, household access to financial credit, and local democracy climate. Table 3 presents the estimated results based on panel data with the RE approach. Similar to what we have estimated in the FE estimator, we consistently found a statistically significant and positive effect (at the 1% level in all models) of the GOVT variable on inclusive development. Successively the GOVT variable still has the largest magnitude, followed by other variables as previously found in the FE model. The R-squared value in column (8), which includes all determinants, is 0.793, slightly lower than the R-squared in the FE estimator, which may imply that fixed effects analysis with the existing variables can explain the variation of changes in development index of at least 79.3 percent. The statistical results of the Hausman test show that the estimation using the FE approach has been statistically recommended.

Table 4 illustrates the estimation results by using lag 1 (t-1) on all independent variables. We find our estimation results do not differ from the FE approach (without lags). The fiscal independence index variable which represents the element of governance seems to be consistent in its estimation ability for all specifications (positive and significant effect at 1% level in columns (1)-(7) and 10% (column (8))). With this lags inclusion, we find a decrease in the magnitude of the coefficients by almost half compared to the coefficients estimated using without lags. Nothwithstanding decreased in the coefficient, the GOVT variable still has the greater effect compared to the non-governance variables. By contrasting the model with and without lag, we still find that variations explained by regressors included, for example, as shown in column (8) are 76.2 percent, relatively the same as finding when lag excluded.

Similar to the interpretation of the GOVT coefficient in the FE model, ceteris paribus assumption applied, a one percentage point increase in the GOVT index raises the inclusive development index at the provincial level in Indonesia by 0.449 percent (i.e. if the average inclusive development index is 1.681, an increase in inclusiveness by 0.449 percent increases the index to become 1,689 from the average). In both the FE model with and without lag, we obtain negative results on population growth, for example in column (5), population growth is estimated to reduce the inclusive development index by 0.046 percent (for example, with an average of 1.681, there is a decrease in inclusiveness, making it turn down to 1.664 points each year). The variable of population quality which is proxied by the higher education attained by locals and the flow of capital (both sourcing from foreign and domestic) are still the dominant non-governance determinants to affect inclusive development.

Considering the problem of serial correlation and cross-sectional dependence on the previous estimation of FE, we retested the estimation in equation (1) using PCSE and Driscoll-Kraay estimators. Table 5 shows our estimates have relatively consistent with previous FE and RE findings. In the PCSE approach, we found that the GOVT coefficients were still the largest compared to other covariates in all specifications (columns (1)-(4)) and significant at the 1% level. For example, in the specification in column (4), an increase in the fiscal independence index by 1 percentage point has the potential to increase the province's inclusive economic development index score by 0.354 percent, ceteris paribus. The estimation results using the D-K method (with the FE option) also find consistent as estimated in the PCSE approach, but the magnitude of the GOVT coefficients in all specifications (columns (5)-(8)) on inclusive development tends to be greater.

Dominant effects from GOVT than the non-governance ones was found in all estimates applied (FE, RE, FE with lag, PCSE, and D-K estimators). All results supports Acemoglu (2012); Chou & Huque, (2016); Jakšić & Jakšić (2018) who recommend institutional factors as a main determinant in the formation of inclusive development (or inclusive growth). That the more effective the government runs at the local level, proxied by the ability to "generate" income, the better government professionalism emerges. Such a climate aids the achievement of inclusive economic development in which economic growth, equity and poverty reduction as well as expanding access and opportunities for marginalized local citizens are dimensions reflecting inclusive development.

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	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
VARIABLES	FE1	FE2	FE3	FE4	FE5	FE6	FE7	FE8
GOVT	3.280***	2.185***	1.701***	1.543***	1.250***	1.023***	1.041***	0.805***
	(0.445)	(0.460)	(0.440)	(0.397)	(0.341)	(0.294)	(0.281)	(0.228)
HIGHEDUC (%)		0.032***	0.024***	0.020***	0.018***	0.014***	0.013***	0.010*
		(0.004)	(0.004)	(0.005)	(0.005)	(0.005)	(0.004)	(0.006)
GRTPop (%)			-	-	-	-	-	-
			0.084***	0.069***	0.070***	0.057***	0.055***	0.047***
			(0.017)	(0.015)	(0.015)	(0.016)	(0.014)	(0.013)
ProtConsPercap (%)				0.004**	0.003*	0.000	0.001	-0.000
				(0.001)	(0.001)	(0.001)	(0.001)	(0.002)
IDI					0.003***	0.002***	0.002***	0.002***
					(0.001)	(0.001)	(0.001)	(0.001)
Hhcredit (%)						0.004***	0.003***	0.002
						(0.001)	(0.001)	(0.001)
Log FDI							0.012***	0.010**
							(0.003)	(0.004)
Log PMDN								0.018**
-								(0.007)
Constant	1.348***	1.218***	1.461***	1.286***	1.192***	1.327***	1.241***	1.325***
	(0.045)	(0.044)	(0.069)	(0.069)	(0.059)	(0.072)	(0.078)	(0.082)
Observasi	239	239	239	239	239	239	239	237
Number of id	30	30	30	30	30	30	30	30
R-squared	0.401	0.646	0.695	0.710	0.735	0.760	0.773	0.796

 Table 2. Impact of Governance and non-Governance on Inclusive Development Index (Fixed-Effect

 Estimator)

Table 3. Impact of Governance and non-Governance on Inclusive Development Index (Random Effect)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
VARIABLES	RE1	RE2	RE3	RE4	RE5	RE6	RE7	RE8
GOVT	1.769***	1.515***	1.273***	0.988***	0.882***	0.856***	0.745***	0.581***
	(0.432)	(0.435)	(0.356)	(0.313)	(0.280)	(0.247)	(0.240)	(0.212)
HIGHEDUC (%)		0.033***	0.025***	0.019***	0.017***	0.014***	0.014***	0.011**
		(0.004)	(0.003)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
GRTPop (%)			-	-	-	-	-	-
			0.085***	0.068^{***}	0.065***	0.050***	0.050***	0.040***
			(0.015)	(0.014)	(0.013)	(0.013)	(0.011)	(0.010)
ProtConsPercap				0.005***	0.004**	0.002	0.002	0.001
(%)								
				(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
IDI					0.003***	0.002***	0.002***	0.002***
					(0.001)	(0.001)	(0.001)	(0.001)

Hhcredit (%)						0.003*** (0.001)	0.003*** (0.001)	0.002* (0.001)
Log FDI						(0.001)	0.013*** (0.003)	0.010** (0.004)
Log PMDN							(0.003)	(0.004) 0.019*** (0.006)
Constant	1.502***	1.279***	1.499***	1.271***	1.152***	1.244***	1.177***	1.274***
	(0.035)	(0.038)	(0.049)	(0.072)	(0.063)	(0.074)	(0.080)	(0.079)
Observations	239	239	239	239	239	239	239	237
Number of id	30	30	30	30	30	30	30	30
R-squared	0.401	0.637	0.691	0.701	0.731	0.757	0.769	0.793

Table 4. Impact of Governance and non-Governance on Inclusive Development Index (*Fixed-Effect with*lag(1))

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
VARIABLES	FE1	FE2	FE3	FE4	FE5	FE6	FE7	FE8
L.GOVT	2.625***	1.755***	1.367***	1.184***	0.811***	0.671**	0.698***	0.449*
	(0.387)	(0.467)	(0.414)	(0.338)	(0.281)	(0.254)	(0.241)	(0.227)
L.HIGHEDUC		0.030***	0.023***	0.019***	0.017***	0.015***	0.014***	0.013***
		(0.005)	(0.005)	(0.005)	(0.004)	(0.004)	(0.004)	(0.004)
L.GRTPop			-0.069***	-0.048***	-0.046***	-0.036**	-0.035***	-0.033**
			(0.017)	(0.015)	(0.013)	(0.015)	(0.013)	(0.012)
L.ProtConsPercap				0.005***	0.004^{***}	0.003**	0.003***	0.003**
				(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
L.IDI					0.003***	0.003***	0.003***	0.003***
					(0.001)	(0.001)	(0.001)	(0.000)
L.HHcredit						0.002*	0.001	0.001
						(0.001)	(0.001)	(0.001)
L.IFDI							0.013***	0.012***
							(0.003)	(0.003)
L.IPMDN								0.013**
								(0.006)
Constant	1.434***	1.305***	1.501***	1.234***	1.110***	1.197***	1.109***	1.148***
	(0.039)	(0.044)	(0.063)	(0.070)	(0.063)	(0.078)	(0.084)	(0.084)
Observations	210	210	210	210	210	210	210	208
R-squared	0.341	0.583	0.628	0.661	0.714	0.726	0.746	0.762
Number of id	30	30	30	30	30	30	30	30

 Table 5. Impact of Governance and non-Governance on Inclusive Development Index (PCSE dan Driscoll-Kraay Estimator)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
PCSE	PCSE	PCSE	PCSE	D-K	D-K	D-K	D-K
0.684***	0.684***	0.500***	0.354***	1.250***	1.023***	1.041***	0.805***
(0.147)	(0.148)	(0.142)	(0.118)	(0.120)	(0.124)	(0.119)	(0.106)
0.010***	0.010***	0.010***	0.008^{***}	0.018***	0.014***	0.013***	0.010***
(0.004)	(0.004)	(0.003)	(0.003)	(0.004)	(0.005)	(0.005)	(0.003)
-	-	-	-	-	-	-	-
0.044***	0.045***	0.042***	0.026***	0.070***	0.057***	0.055***	0.047***
(0.013)	(0.009)	(0.009)	(0.007)	(0.015)	(0.011)	(0.009)	(0.012)
0.006**	0.006**	0.006***	0.004*	0.003**	0.000	0.001	-0.000
(0.002)	(0.002)	(0.002)	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)
0.002* (0.001)	0.002* (0.001)	0.002* (0.001)	0.002** (0.001)	0.003*** (0.000)	0.002*** (0.000)	0.002*** (0.000)	0.002***
	PCSE 0.684*** (0.147) 0.010*** (0.004) - 0.044*** (0.013) 0.006** (0.002) 0.002*	PCSE PCSE 0.684*** 0.684*** (0.147) (0.148) 0.010*** 0.010*** (0.004) (0.004) - - 0.044*** 0.045*** (0.013) (0.009) 0.006** 0.006** (0.002) (0.002) 0.002* 0.002*	PCSE PCSE PCSE PCSE 0.684*** 0.684*** 0.500*** (0.147) (0.148) (0.142) 0.010*** 0.010*** 0.010*** (0.004) (0.004) (0.003) - - - 0.044*** 0.045*** 0.042*** (0.013) (0.009) (0.009) 0.006** 0.006** 0.006** 0.006** 0.006** 0.006**	PCSE PCSE PCSE PCSE 0.684*** 0.684*** 0.500*** 0.354*** (0.147) (0.148) (0.142) (0.118) 0.010*** 0.010*** 0.008*** 0.008*** (0.004) (0.004) (0.003) (0.003) 0.045*** 0.045*** 0.026*** 0.026*** (0.013) (0.009) (0.009) (0.007) 0.006** 0.006*** 0.004** 0.004** (0.002) (0.002) (0.002) (0.002) 0.002* 0.002* 0.002* 0.002*	PCSE PCSE PCSE PCSE DCK 0.684*** 0.684*** 0.500*** 0.354*** 1.250*** (0.147) (0.148) (0.142) (0.118) (0.120) 0.010*** 0.010*** 0.010*** 0.008*** 0.018*** (0.004) (0.004) (0.003) (0.003) (0.004) 0.013 (0.009) (0.009) (0.007) (0.015) 0.006** 0.006** 0.004** 0.003** (0.002) (0.002) (0.002) (0.002) (0.002) 0.002* 0.002* 0.002* 0.002** 0.003**	PCSE PCSE PCSE PCSE D-K D-K 0.684*** 0.684*** 0.500*** 0.354*** 1.250*** 1.023*** (0.147) (0.148) (0.142) (0.118) (0.120) (0.124) 0.010*** 0.010*** 0.010*** 0.008*** 0.018*** 0.014*** (0.004) (0.003) (0.003) (0.004) (0.005) 0.014*** 0.013 (0.45*** 0.042*** 0.026*** 0.070*** 0.057*** (0.013) (0.009) (0.009) (0.007) (0.015) (0.011) 0.006** 0.006** 0.004** 0.003** 0.000 (0.002) (0.002) (0.002) (0.002) (0.001) (0.001) 0.002** 0.002* 0.002** 0.002** 0.002** 0.002** 0.002**	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$

Hhcredit (%)		-0.000	0.000	-0.000		0.004***	0.003***	0.002*
Log FDI		(0.002)	(0.002) 0.012***	(0.001) 0.006**		(0.001)	(0.001) 0.012***	(0.001) 0.010**
- 6			(0.003)	(0.003)			(0.004)	(0.004)
Log PMDN				0.022^{***}				0.018^{***}
				(0.005)				(0.005)
Constant	1.160***	1.161***	1.094***	1.161***	1.192***	1.327***	1.241***	1.325***
	(0.135)	(0.136)	(0.134)	(0.121)	(0.055)	(0.052)	(0.040)	(0.047)
Observations	239	239	239	237	239	239	239	237
R-squared	0.946	0.946	0.943	0.952				
Number of id	30	30	30	30	30	30	30	30

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

5 Conclusion

This study provides the extent to which governance-related indicators matter for inclusive economic development using regional (province) level data in Indonesia. This study found a positive, dominant, and significant influence on almost all specifications and estimation strategies used (e.g. FE, RE, FE with lag, PCSE and D-K) of governance indicator on inclusive development compared to other control variables which represent non-governance dimensions.

This research concludes that strengthening the quality of institutions, where one aspect is through local taxing power (improving the ability of local government to generate local-owned source revenue), within local government level in Indonesia is a key to accelerate quality of inclusive development. The impact is strong in magnitude compared to traditional macro-variables such as investment, population, and capital allocation received by household. With the decentralization system embraced since 2001 and effectively commenced in 2005, a central role has been on the hand of local government to perform better quality of administration, greater degree in professionalism to execute measurable development programs, and faster innovations capturing public needs. Fiscal independence represents these qualifications for local government performance, as the more independent a government is, the more capable they can manage their resources for the sake of their community. We also find, for non-governance indicators, that increased in higher education attainment also plays as strong determinants for inclusiveness.

The results of this study open up a direction for further discussion about whether the same results might consistently be found if using more nuanced district (or sub-district, if any) level data. Exploratory investigations can also be applied to other countries (preferably to scope lower-middle-income countries), to test the consistency of the findings in different local institutional culture settings.

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