RENT-SEEKING TOWARDS ECONOMIC GROWTH: EMPIRICAL STUDY IN LOWER-MIDDLE-INCOME COUNTRIES

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Abstract

The good effects of globalization are not felt by all countries. Lower-middle-income countries are constrained by ineffective or poorly implemented economic policies in those countries. One indicator of this ineffectiveness is the low rate of controlling rent-seeking in lower-middle-income countries. Therefore, this study analyzes the effect of controlling rent-seeking on the economic growth of lower-middle-income countries. It is important to study where economic growth has an important role in the economic development of lower-middle-income countries. This study also uses control variables such as capital formation, population, and lag of economic growth through the Partial Adjustment Model (PAM) approach. Based on the results of regression testing that has been carried out, controlling rent seeking and capital formation is known to have a positive and significant effect on economic growth in lower-middle-income countries. Meanwhile population has a negative and significant effect on the economic growth of lower-middle-income countries.

Keywords: *rent seeking; lower-middle-income country; growth; capital formation; population; lag of economic growth*

INTRODUCTION

Over the past twenty years, the world's economy has experienced significant improvement due to the massive globalization effect. The elevated information and communication technology leads to the shrinking world and the disappearance of the country's borders (Hermawanto and Anggrani, 2020). The world has become a borderless place that could accelerate and expand the access to capital and the global market through technology that makes the economic growth in a different condition compared to twenty years ago (Wong, et al., 2021). On the other hand, not every country experiences significant improvement, especially the lower-income countries.

Todaro and Smith (2012), give explanation about the lower-income countries as their economic development condition. Lower income countries or developing countries has lower human capital than developed countries, a larger gap level, higher absolute poverty, higher people's growth, wider social fractionalization, the bigger number of people in the village with faster village-city migration, lower industrialization level, a geographical condition that hindered the growth, financial sector, and less-developed other markets, remaining colonial influence such as the low institution quality with external dependency. (It can be re arranged to be more concised)

Actually, the existence of government plays an essential role in bringing the economy to ideal condition (Frieden, 2020). The neo-classical economists have deeply thought about "correcting" market imperfection to meet a certain condition that might be achieved once the market is in the perfect condition (Wolff & Resnick, 2012). When dealing with externality, the government has the right to prohibit the condition that might cause the externality (Correia & Roseland, 2022). Also, the government can charge the tax for the activities that potentially can generate negative externality and subsidize the activities with positive externality (Beeks & Lambert, 2018). A similar approach also could be applied to deal with public goods issues since the government should initiate the procurement of public goods since the private companies are uninterested in producing them (Anomaly, 2015).

Meanwhile, for the lower-middle-income countries, the role of the governments is widely open to catch up with their lag from the developed countries and are expected to become the development agent (Bulman

et al., 2018). It has been happening since the 60s by the Keynes criticism, yet until recently, the situation has been considered stagnant and similar (Piereson, 2012). The developing countries persist in catching up with the achievements of developed countries, particularly in revenue (Brooks et al., 2010). Undoubtedly, revenue represents power, and stakeholders can perform many ways to earn that. There is a close relationship between the business people who targetted the benefits and the government that holds the policies. Instead of prioritizing the state's interest, personal or group interests are lined up, and the government can regulate the policies leading to partial policies that tend to benefit.

In the 60s, rent-seeking became the cause of the lag between developing countries from the developed ones (Rowley & Schneider, 2004). Rent refers to the economic rent resulting from the benefits earned from long-term monopoly activities. The businessmen keep on maintaining their power of monopoly by intercepting the substitution goods, later positioned in the supernormal condition to get the higher rent. They collude with the government to set the profitable economic regulation, such as the policy of prohibited imports, tariff policies and quote policies. The businessmen will provide rewards or bribes to the government in the form of money or "present" (Roy, 2008).

The reward or bribe accepted by the government is also called rent (rente) since the power is abused for personal interest purposes. If it is carried out, the economic loss will be triggered. The policies will tend to obstruct economic efficiency. The initial assumption on the role of the government in fixing the market failure actually encourages the government failure, in which the intervention will eventually cause a loss. It is often found in the lower-middle-income countries that the people are characterized as undemocratic with closed and non-transparent economic politics. To be clear, the institutional framework or government institutions in lower-middle-income countries are weak and incapable of refusing any forms of personal or group interest (Bennett et al., 2018).

North (1990) emphasized the argument by suggesting that weak institutions disclose the opportunity for rent-seeking, especially in lower-middle-income countries in the middle of their development to become the developed countries. In terms of injustice and partiality, a weak institutional framework, both in planning and practice, leads to a wider opportunity for rent-seeking. It opens the opportunity for resource abuse, the violation of regulations, and trade restrictions that entirely lead to rent-seeking. When it happens, it could distort the productive economic activities and imposes people with destructive social costs. Eventually, the existence of rent-seeking in the economy is a sign of poor institution quality (Ugur and Dasgupta, 2011). It is a challenge that should be dealt with by lower-middle-income countries that needs process reconsideration, involving the entire components to design and implement the policies that uphold the quality of institutions to fight the activities of rent-seeking (Auriol, 2006 in Wong, et al., 2021).

One of the perceptions to measure the quality of an institution is the control of corruption index that becomes one of the indicators in World Governance Indicators (WGI) by the World Bank. The Control of Corruption Index reflects the perception of how far the political power is employed to gain personal interest, including on small and big scale, as well as the "seizure" conducted by the elite countries and the people of interest (WGI, 2022). The index is ranged from -2.5 to 2.5, in which -2.5 presents the weakest corruption control (weakest) and 2.5 indicates the strong corruption control (strongest). Based on the observation, it is revealed that a country with good corruption control will have a fine economic growth (measured by using per capita income). The higher corruption control index represents the high accountability of the state's financial management and public sector efficiency to elevate the control of rent-seeking activities.

The control of rent-seeking that apparently becomes the main explanatory variable tends to decrease the economic growth through resource mislocation, declining efficiency, and public administration transparency (Auriol et al., 2016). Therefore, the poor quality of government institutions creates the opportunity for rent-seeking to find particular chances and relocate the resources (wealth allocation) by violating the rules. Nevertheless, in the context of lower-middle-income countries, rent-seeking activities are heterogeneous (Iqbal and Daly, 2014) due to each country's different institution quality. For instance, the rule of law between one low-middle-income country and another is different in effectiveness, the right is improperly defined, and democracy right is different in coverage. These qualities are different from one low-middle-income country to another worldwide.

Two main reasons why these redistribution activities played by rent-seekers could drain the expensive resources originally designated for economic growth. First, the activities of rent-seeking demonstrate the significant raise in lower-middle-income countries. In another word, the increase in rent-seeking activities makes them more interesting than the productive activities. It eventually promotes a double balance in the economy. These activities direct the economy to a "negative" balance because of the allocation of resources to the unproductive sector. Second, the government's rent-seeking activities have a worse effect than those performed by the private sector. Particularly, the businessmen need the facilities accommodated by the government, such as import quotas, licenses, permits, and others. It is seen as an opportunity for the rent-seeker in the public sector. Hence they tend to trigger the public policy's efficiency. It affects economic growth with stalled development and economic slowdown.

There are two mechanisms that the rent-seeking process should fulfill to affect the economy. The first mechanism is law manipulation to cover the fraud made by the actors. As previously mentioned, the lower-middle-income countries are marked by the weakness of their rule of law, ineffective check and balance, and poor public sector management. The rent-seekers in these countries are charged with light punishment for their actions that harm others. The second mechanism is" power in numbers" owned by the rent-seekers. If only a few persons are involved in rent-seeking, the possibility of being caught is bigger. Still, if many corruptors are involved in the activities, the possibility of being caught is lower. The higher the level of rent-seeking, the more unproductive cost allocations are spent. Based on the theoretical background, the hypothesis is that higher control in rent-seeking leads to an increase in economic development. Therefore, the coefficient of rent-seeking is expected to be positive.

While the point of view that considers the rent-seeking positively influences, economic growth states that rent-seeking will cause a limited resource waste and tends to decrease the economic growth, later the control is required to accelerate the economic growth (Fethi and Imamoglu, 2021). The support for this statement in which the rent-seeking need a good control stated by many researchers since the rent-seeking is considered as "sand on the wheels" that can hinder and weigh down the economy. Ghalwash (2014) found that corruption (as a proxy for rent-seeking) negatively influences economic growth in Egypt. Ibrahim et al. (2015) supported the finding of Ghalwash (2014) and verified that a similar occurrence happens in sub-Sahara Africa. Negative corruption influences economic growth through a decrease in investment due to a lack of trust from investors (Wang, 2016). Yun et al. (2015) stated that long-term corruption negatively and significantly influences the economic growth in Malaysia. Amin et al. (2013); Boussalham (2018); Gründler and Potrafke (2019); Thach et al. (2018); Tidiane, (2019); and Ugur (2014) identified a similar result, in which the corruption influences the economic growth negatively and significantly, measured from per capita income.

While the opposite opinion signifies that in a certain condition, corruption (proxy of rent-seeking) is considered as "greasing of the wheels" that lubricates the development wheel, the existence of corruption can boost the economy; hence the good control of corruption activities is unnecessary. Therefore, it can be said that rent-seeking influences economic growth negatively. Good control will threaten the existence of corruption that is considered to accelerate the processes with interference from the government through bribery. At the same time, corruption can enhance efficiency through such bribery. The most common term to illustrate the occurrence is "fast money", paid by an individual to shorten the bureaucracy process. Huang (2016) found that corruption does not hinder the economy; on the other hand, it supports the economic aggregate improvement as in China and South Korea. Kato and Sato (2015) found many advantageous impacts from the corruption that confirms the hypothesis of "greasing the wheels". At the same time, Saha and Sen (2019) implied positive relation and concluded that corruption and economic growth have a direct correlation in autocracy compared to democracy. What is the contribution of this paper? Various result in estimate relationship between rent-seeking and economic growth made wider gap. With the uncertainty of the relationship between rent-seeking and economic growth based on previous research, this research also contributes to prove the relationship between rent-seeking and economic growth in lower middle-income countries through a different and simpler approach. This research aims to study what correlations encompass rent-seeking and economic growth in lower-middle-income countries.

METHODS

In analyzing the effect of rent-seeking, a data panel is employed involving 36 countries that purposively determined from 55 lower-middle-income countries. The data are derived from World Bank and Worldwide Governance Indicators (WGI). The data are collected from 2010 to 2019. The research is focused on lower-middle-income countries based on the importance of these countries to be no longer included in the developing countries group, considering that 5 out of 10 most populous countries are counted in this categorization.

Thie research employs the Labor Augmenting theory or Harrod Neutral that Solow developed by including A or technology in the model; technology advance has an exogenous character (Jones & Vollrath, 2013). The production function used is written as follows:

$$Y = F(K,AL) \quad ....(1)$$

$$Y_{i,t} = K^{\alpha}_{i,t}(A_{i,t}\,L_{i,t})^{1-\alpha} \quad ....(2)$$

In which Y is defined as real output, K is considered as physical capital, L represents the number of workforces, A represents labor-augmenting factors that reflect the level of technology and efficiency in economics. The writer assumes that α+β<1. Hence there are constant returns towards input factors and separate decreases of

returns. As illustrated by the empirical decrease of Fethi and Imamoglu (2021), labor employment and labor-augmenting technology are assumed to develop as the following functions:

$$L_{i,t} = L_o{}^{nit} \quad\text{...}(3)$$

$$A_{i,t} = A_o{}^{gt+RS0} \quad\text{..}(4)$$

In which n represents the exogenous level of the workforce, g is an exogenous level of technology development, RS is the rent-seeking control vector and other vectors that could influence the level of technology and efficiency in the economy, and θ is the coefficient vector that related with activity and other variables.

In this model, variable A depends on the enhancement of exogenous technology and the control level of rent-seeking. This change is adjusted with the empirical study on rent-seeking and economic growth in the relevant economy. In a relevant economy, economic growth is encouraged by the effect of rent-seeking control, and the growth can be accelerated (Obiyan, 2004). Rodrik (2004) also emphasized that technological advances can inspire economic growth by utilizing resources, geographic factors, and global integration. It is essential to be mentioned that technology and efficiency could be measured by RS that is defined as the rent-seeking control index.

Besides, in steady-state, output per labor grows at the level of constant g (an exogenous component of the efficiency growth level of variable A). This output can be defined as follows:

$$\frac{Y_{i,t}}{A_{i,t} + L_{i,t}} = (k_{i,t})^{\alpha} \quad\text{...}(5)$$

$$\frac{Y_{i,t}}{L_{i,t}} = A_{i,t}(k_{i,t})^{\alpha} \quad\text{...}(6)$$

By employing log-linear at both sides of Equation (5), Equation (6) can be formulated as follows:

$$\ln\left(\frac{Y}{L}\right) = \ln A + \alpha \ln k \text{ (i and t can be omitted)} \quad\text{.............................}(7)$$

In which $A = A_0{}^{gt+RS0}$ and $y^* = \left(\frac{Y}{L}\right)^*$ The addition of RS0 cannot increase the level of investment "break-even" that is still provided by $(n + g + \delta)$. By considering that $s_k e^{-(1-\alpha)\ln K} = (n + g + \delta)$, then:

$$\ln y^* = \ln A_0 + gt + 0RS + \frac{\alpha}{1-\alpha} \ln s^K - \frac{\alpha}{1-\alpha} \ln(n + g + \delta) \quad\text{.............................}(8)$$

If each coefficient is rewritten as:

$$\omega_0 = \ln A_0 + gt \quad\text{...}(9)$$

$$\omega_1 = 0 \quad\text{..}(10)$$

$$\omega_2 = \frac{\alpha}{1-\alpha} \quad\text{..}(11)$$

$$\omega_3 = -\frac{\alpha}{1-\alpha} \quad\text{...}(12)$$

In which g and δ = constant, then the Equation (13) can be formulated as:

$$\ln y^* = \omega_0 + \omega_1 RS + \omega_2 \ln s^K + \omega_3 \ln n_{it} \quad\text{.................................}(13)$$

The notation of y represents the growth of output per labor, RS is described as the rent-seeking control, s^K is physical capital investment, and n_{it} represents a number of population. Meanwhile, ω_1, ω_2, ω_3 are considered as the elasticity of each component.

The Equation (13) is transformed into the econometrics model, in which $\omega_0 = \beta_0$, $\omega_1 = \beta_1$, $\omega_3 = \beta_3$ with the cross-section i=1,2,…,36, time t=1,2,…,10 and data that are used in the form of log natural:

$$\ln GDPL^*_{i,t} = \beta_0 + \beta_1\, RS_{it} + \beta_2 \ln GCF_{it} + \beta_3 \ln POP_{it} + u_{it} \;.................................(14)$$

In which the $\ln GDPL^*_{i,t}$ represent the growth of output per capita in log natural, RS_{it} is the rent-seeking control that is sourced from the data of control of corruption published by Worldwide Governance Indicators (WGI), $\ln GCF_{it}$ is the capital formation by employing the data of the Gross Capital Formation, $\ln POP_{it}$ represents numbers of population ranged from 15-64 years old in log natural. β_0 adalah intercept, $\beta_1, \beta_2, \beta_3$ is the elasticity of each component and u_{it} is defined as an error. -i describes cross-section, and -t is time series.

Theoretically, the research includes the expectation aspect or characterized as expectation adaptive, in which the value of $\ln GDP_{i,t}$ is unable to be observed. In predicting it, the partial adjustment can be carried out, generally called as Partial Adjustment Model (PAM), as follows:

$$\ln GDPL_{i,t} - \ln GDPL_{i,t-1} = \delta_{i,t} \,(\ln GDPL^*_{i,t} - \ln GDPL_{i,t-1}) \;.................................(15)$$

In which $\ln GDPL_{i,t}$ is the economic growth in i country at the t period, $\ln GDPL_{i,t-1}$ is considered as the optimal economic growth in i country at t period, and $\delta_{i,t}$ is defined as the coefficient of adjustment rate between actual economic growth towards optimal economic growth.

The actual economic growth will balance the economic growth towards optimal capital. It can be observed at the end of the period. Therefore, the Equation (15) can be reformulated as follows:

$$LNGDPL_{i,t} = (1-\delta_{i,t})\, \ln GDPL_{i,t-1} + \delta_{i,t} \ln GDPL^*_{i,t} + \epsilon_{i,t} \;.................................(16)$$

Thus, the Equation (16), after being adjusted with the above Partial Adjustment Model (PAM), can be eventually formulated as:

$$\ln GDPL^*_{i,t} = \beta_0 + \beta_1\, RS_{it} + \beta_2 \ln GCF_{it} + \beta_3 \ln POP_{it} + (1-\delta)\ln GDPL_{i,t-1} + \varepsilon_{it} \;..................(17)$$

In which the coefficient of lag in economic growth $\ln GDPL_{i,t-1}$ statistically must be significantly valued, and the coefficient of t must be positive.

RESULTS

Table 1. Descriptive Statistics and Correlation Matrix

Variable	Mean	Deviation Standard	Min	Max	Numbers of Observation
lnGDPL	7.622527	0.514697	6.595318	8.633039	360
RS	2.890776	0.466737	2.090798	5.140954	360
lnGCF	22.87307	1.92722	18.9648	27.49341	360
lnPOP	16.13053	1.879815	12.17805	20.63504	360
lag_lnGDPL	7.612193	0.516998	6.595318	8.633039	324

Source: STATA 17, 2022 (processed)

Descriptive statistics are illustrated in Table 1. It is used to explain or describe the data of each research variable, which are per capita economic growth LNGDPL), the rent-seeking control (RS), capital formation (LNGCF), population (LNPOP) and lag of economic growth $\ln GDPL_{t-1}$. The variable of LNGDPL describes the economic growth through GDP per capita. RS variable describes the control of rent-seeking in a certain country, shown by the Control of Corruption Index, which is an index ranging from the interval of -2,5 to 2,5 (later on, for data processing purposes, the interval is adjusted ranging from 1 to 6). The bigger value of rent-seeking demonstrates the stronger control on rent-seeking control performed by a country and vice versa. The mean and the deviation standard of rent-seeking activities control value is notified as 2.890776 and 0,466737, respectively. Besides, the lowest value of rent-seeking control is determined as 2,090798, and the highest is revealed as 5,140954.

The descriptive statistics also indicate that in the absolute state, the mean value on the entire variables is larger than the value of the deviation standard. Deviation standard showcases the data variation. When a deviation standard value is way bigger than the mean value, the mean value represents the poor condition of the entire data. On the contrary, if the occurrence demonstrates the opposite, then the mean value can be considered the overall data representation.

Table 2. The Initial Estimation of the Best Model

Dependent: lnGDPL	OLS	FE	RE
RS	0.0214597***	0.0433194***	0.0213601***
	(0.6)	(3.72)	(3.60)
lnGCF	0.0024519	0.06843324***	0.0188675***
	(5.58)	(7.92)	(3.23)
lnPOP	0.0026995	-0.0972506***	-0.0137189**
	(0.64)	(-3.09)	(-2.25)
Lag_lnGDPL	0.9808554***	0.8502604***	0.9641084***
	(216.71)	(34.32)	(136.11)
cons	0.0064288	1.039697***	0.233182
	(0.22)	(2.55)	(0.49)
F-statistic	25667.02	908.67	37779.28
Prob(F-statistic)	0.0000	0.0000	0.0000
R-squared	0.9969	0.9731	0.9967
Correlated Random Effects - Hausman Test			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	72.51	4	0.0000

Source: STATA 17, 2022 (processed)

Note: * significant at the level of confidence of 90%

 ** significant at the level of confidence of 95%

*** significant at the level of confidence of 99%

Based on the estimation result presented in Table 2, it can be verified that the Fixed Effect Model is the best model to be implemented. All variables indicate a level of confidence of 1 percent. Yet after conducting the classic assumption test, the estimated model did not meet the classic assumption. Therefore, the robust standard error is employed to correct the standard error.

Table 3. Final Estimation of Robust Standard Error

Dependent: lnGDPL	OLS	FE	RE
RS	0.0214597***	0.0433194***	0.0213601**
	(4.41)	(3.60)	(2.42)
lnGCF	0.0214597	0.0684324***	0.0188675**
	(0.39)	(7.43)	(2.09)
lnPOP	0.0026995	-0.0972506**	-0.0137189
	(0.41)	(-2.64)	(-1.47)
Lag_lnGDPL	0.980885***	0.8502604***	0.9641084***
	(188.82)	(25.00)	(109.61)
Cons	0.0064288	1.039697**	0.0233182
	(0.20)	(2.15)	(0.46)
F-statistic	34544.94	740.18	35707.72
Prob(F-statistic)	0.0000	0.0000	0.0000
R-squared	0.9969	0.9731	0.9967

Source: STATA 17, 2022 (processed)

Note: * significant at the level of confidence of 90%

 ** significant at the level of confidence of 95%

*** significant at the level of confidence of 99%

Based on Table 3, the fixed effect approach is identified as the best model. The estimation result shows that the variable of rent-seeking control represented by the Control of Corruption Index has a positive and significant influence on economic growth. It can be seen from the RS possibility, which is bigger than 0.001, smaller than the significance level α of 5 percent (prob < α). The value of RS coefficient, which is 0.0433194, indicates the positive relationship between rent-seeking control and economic growth. The interpretation of RS coefficient is described as the increase of rent-seeking control for 1 percent will enhance economic growth by 0.0433194 percent, ceteris paribus. In the long term, the coefficient of the rent-seeking control variable is valued as 0.2892982, which indicates the existence of a positive relationship toward economic growth, with the interpretation that each increase of rent-seeking control by 1 percent will enhance economic growth by 0.2892982 percent, ceteris paribus.

DISCUSSIONS

The estimation result is aligned with the applied theory, verifying that the increase in rent-seeking control leads to economic efficiency. The rent-seeking activities will bring unproductive resources and suffer the community many social losses. The enhancement of control tightens the opportunity for rent-seeking from happening; in another word, more rent-seeking activities can be settled. By using a similar proxy, this research is aligned with the study conducted by Fethi and Imamoglu (2021), which stated that rent-seeking control over economic growth positively and significantly influences most territories besides developed countries. While with the similar research object characteristics, the findings in this research are in line with a study carried out by Akhter and Manzoor (2015); Gogos et al. (2018); Iqbal and Daly (2014); Wong et al. (2021) that rent-seeking clearly shares a negative influence towards economic growth, it means that the activities of rent-seeking could decelerate the economic growth in lower-income countries that some of them are taken as samples for this research. Therefore, the good control of rent-seeking (stated by the high index score) leads to economic improvement. Many countries have become contributors to news releases associated with Corporate Fraud and Corruption 2022. Guide House US admitted the negative and direct impact of corruption on income, eroding public trust in the government. BDO Mexico revealed that the board and executive senior keep developing the control towards fraud and corruption activities (financierworldwide.com,).

Moreover, Mexico prepares the budget for the obedience program to reduce the criminals' activities and develops a tight framework that confines the corruption movements. France, through FTI Consulting Inc, and Great Britain through Stoneturn explains that those countries have adopted the proactive approach in the last couple of years due to the inclining numbers of corruption control. While in BDO Brazil, besides implementing good governance, also employing anti-fraud and corruption programs.

Even though the proactive steps have been taken, Ireland found that it is insufficient without the existence of governance management and proper corruption risk. BDO India claimed that it handled the corruption proactively by utilizing data analytics and technology as precautions. Yet, the implementation is considered a way from expectation. China claims that they have an internal anti-corruption firewall that becomes the first defense against corruption behavior. The United Arab Emirates sees the trend of corruption control and makes it intensively enforces the law in corruption cases. All countries indeed have the efforts to control and prevent corruption. Still, significant change is shown by the increase of the corruption control index, which becomes a proxy for rent-seeking in this research.

The interesting finding emerges that the above countries, except for India, are higher-income countries with a level of corruption control of more than 1 (the biggest is 2.5). However, in Fethi & Imamoglu (2021), it is said that developed countries are not significantly influenced by rent-seeking (proxied by corruption control) yet still consider corruption as an item that could damage the image and community's trust. It is reflected in a high index value of corruption control (compared to lower-income countries in revenue).

After the observation period, the COVID-19 pandemic has emerged, leading to a certain vulnerability to new corruption activities. All activities are shifted to digital activities that incommode the monitoring. In Germany, the fraud and corruption cases have surged in numbers, particularly in mask procurements. So as in lower-middle-income countries, which have experienced the decline of check and balance, way before the pandemic strikes. Many activities in rent-seeking are unmonitored during the COVID-19 pandemic. A few people may use the COVID-19 pandemic to obtain benefits, which leads to declining economic growth. It might be one of the input factors, besides others, that lag the production activities.

The coefficient of the positive dependent lag variable and significant probability value met the requirements of Partial Adjustment Model (PAM) utilization. While other control variables, which are capital formation and population numbers, also demonstrate the appropriate result aligned with the applied theory. Gross Capital Formation represents the variable of capital formation that has a positive and significant influence on economic growth. It can be concluded that a positive and significant influence of capital formation on economic growth illustrates

the importance of capital formation, which is crucial for the efforts to increase economic growth addressed for lower-middle-income countries. The estimation results are consistent with the findings from Afonso and de Sá Fortes Leitão Rodrigues (2021); Anggraini et al., (2020); Bal et al., (2016); Meyer and Sanusi (2019); O and C (2016); Ugochukwu and Chinyere (2013); Wong et al., (2021) confirmed a positive and significant correlation between capital formation and economic growth. The addition of direct capital formation could enhance national production, and eventually, the capital formation itself might become a booster for economic growth.

Meanwhile, the population number variable representing a population ranging from 15 to 64 years old indicates a negative and significant influence on economic growth. As depicted in "The Law of Diminishing Return", in the initial production point, the addition of capital per labor will increase more output per labor. The higher the population, the more labor or workers, which lessens the capital stock per labor. Hence, the addition of capital stock per labor no longer increases the output per labor yet diminishes it. High population growth causes a high dependency ratio that declines the level of people's savings; in which in 2019, the aggregate dependency ratio for lower-middle-income countries is counted as 56,20. It means that 100 productive citizens have 56 burdens who are not yet or no longer in productive condition. This finding is aligned with the research conducted by Bucci (2015; Damanik et al., (2021); Sabir and Tahir (2012); Yao and Zhang (2015), which concluded a negative and significant correlation between population numbers and economic growth. In this section, please provides the authors perspectives of views. Overall, this research found that lower middle-income countries have a positive relationship with controlling rent-seeking. In our point of view, this is closely related to the low quality of institutions in this group of countries and is evidenced by the low corruption control index. As suggest by Baeriswyl & Cornand, (2010); Montes & Bastos, (2014), increase the reputation of the institution, as well as increasing transparency is the main solution to solve this problem.

CONCLUSIONS

The research results conclude that rent-seeking is based on its dualism as 'greasing of the wheels' that accelerate the economy to its efficiency. The control of rent-seeking is proven positively and significantly influence the economic growth in lower-middle-income countries, both in the short and long term. In its purpose to control rent-seeking, the group of lower-middle-income countries could focus on corruption control. When the index value is measured high, the control could be said well-implemented. The finding of this research imply that in increasing the index of corruption control, as a form of rent-seeking, public transparency policy and increased accountability in the financial sector can be initiated. A transparent system and high accountability could encourage the government's effective and efficient performance to restrict the opportunity for rent-seeking. Besides, the government needs to directly implement the public sector efficiency, either from the input or output perspective, so that the available resources can be used maximally and unnecessary expenses can be avoided. Lastly, people's participation in controlling the government is required to nurture a clean government.

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