



Determinants of Public Debt Ratio in Middle-Income Countries

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ABSTRACT

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The existence of the Covid-19 pandemic, which hampers mobility and productivity, creates a slowdown in the movement of the wheels of the economy, thus indirectly requiring several countries to increase their sources of revenue through public debt to meet the needs of the people and maintain economic stability in each country. The problems faced by middle-income countries are related to the participation of government and other public institutions both in the formulation of public policies, the management of public resources, to the realization of human rights that should be free from abuse of the position of relevant policymakers. As a result, not a few countries experience uncertainty about the actual situation from public accounts, which has encouraged the creation of doubts and conflicts among the public about the role of governments in dealing with the global economic crisis, which among others, is illustrated through several economic problems that occur in middle-income countries. The purpose of this study is to answer the question of whether, in middle-income countries, the factors of the previous year's debt-to-GDP ratio, fiscal transparency, and corruption, simultaneously and partially influence the debt-to-GDP balance in 74 middle-income countries in 2021. The method used is OLS regression analysis of cross-section data. This study found that the previous year's debt accumulation and corruption significantly affected the debt ratio to GDP. Meanwhile, fiscal transparency hurt the insignificant debt-to-GDP ratio.

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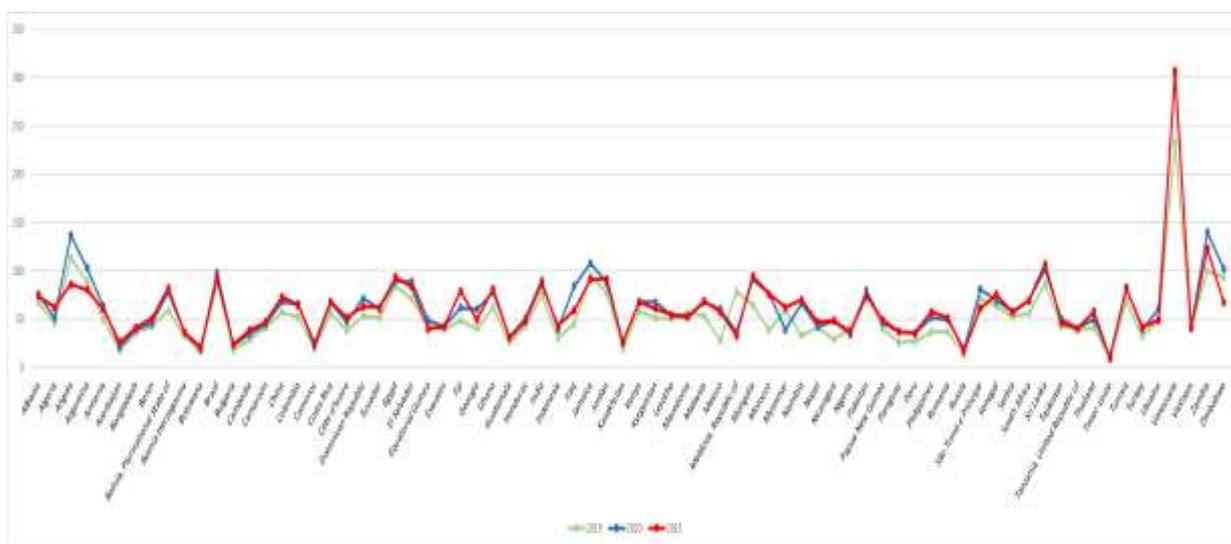


Introduction

The World Bank has historically classified countries' economies into three categories: high-income, middle income consisting of lower-middle-income and upper-middle-income countries, and low-income countries. Among the country's economic groups, middle-income countries (MICs) have a combined population of five billion or more than 70% of the world's seven billion people, and 73% are economically disadvantaged. Middle-income countries represent about a third of global GDP and play an essential role in global economic growth.

In general, the problems faced by middle-income countries are related to the participation of government and other public institutions both in the formulation of public policies, the management of public resources, to the realization of human rights that should be free from abuse of the position of relevant policymakers. As a result, not a few countries experience an uncertainty about the actual situation from public accounts, which has encouraged the creation of doubts and conflicts among the public about the role of governments in dealing with the global economic crisis, which among others, is illustrated through several economic problems that occur in middle-income countries. The Mexican crisis of 1994-1995, the emerging market crisis of 1997-1998, and the European Union financial crisis of 2014 showed severe weakness in the role of government in formulating and implementing policies to overcome the economic downturn that ended in an unpaid debt swelling.

Currently, each country must again face a global economic crisis where the causative factor is the Covid-19 pandemic. The existence of the Covid-19 pandemic, which hampers mobility and productivity, creates a slowdown in the movement of the wheels of the economy, thus indirectly requiring several countries to increase their sources of revenue through public debt to meet the needs of the people and maintain economic stability in each country. However, the government needs to be able to continue to pay public debt and know that the debt burden can have an ongoing impact. Generally, a country's ability to repay public debt can be seen through the ratio of public debt to GDP. The high percentage of public debt to GDP can threaten macro-economic stability and lead to the need for a country's development reset for many years.



Source: World Bank, 2022

Figure 1. The ratio of Public Debt to GDP of Middle-Income Countries 2019 -2021

Based on data released by the World Bank in the publication of the World Economic Outlook for 2022 in Figure 1, it is known that 93% of the sample of 74 middle-income countries

experienced an increase in the debt-to-GDP ratio in 2020. The increase in the debt-to-GDP ratio that occurred in 2020 can be caused by the rise in public debt, a decrease in GDP due to a slowdown in the wheels of the economy, or the two that occur together. On the other hand, although it cannot be declared endemic, in 2021, middle-income countries have begun to make various economic recovery efforts so that 45% of the 74 middle-income countries experience a decrease in the debt-to-GDP ratio.

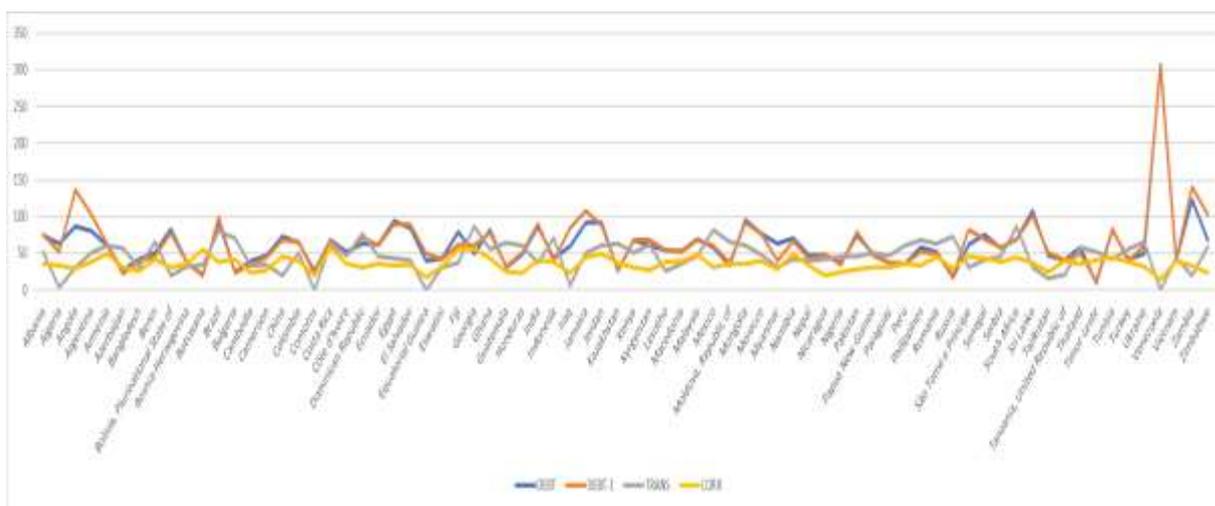
Although in 2021, several countries began to experience a decline in the ratio of public debt to GDP, it cannot be interpreted that the risk of a debt default that had occurred in some countries is unlikely to be repeated. Figure 2 explain the average debt-to-GDP ratio in 74 samples of middle-income countries in 2021 is still 61.79 percent. The high percentage of the debt-to-GDP ratio can be caused by several factors, including debt accumulation in the previous year and low governance that may worsen the economic situation in a country.

The creation of speculation related to the influence of debt accumulation in the previous year as one of the factors affecting the ratio of debt to GDP is based on the thought of Hyman P. Minsky, who explained that the greater the perpetrator accumulates debt, the greater the risk of default and this mechanism occurs naturally (Prasetyantoko, 2010). In reflecting on the crisis that had happened, the accumulation of previous debt that was relatively high had an essential role in the ratio of debt to GDP of a country; several governments in one country formulated policies that encouraged the concept of debt to cover other debts. That leads to the bankruptcy of a country with unpaid debts. This phenomenon is in line with conditions in Sri Lanka, where in 2022, Sri Lanka will officially be declared bankrupt and unable to pay government debt. According to several sources, if you look at the historical accumulation of Sri Lankan debt in previous years has been relatively high; this condition is exacerbated by the Covid-19 pandemic that has hit the world, where the Sri Lankan economy has not escaped the economic downturn caused by the loss of revenue from sectors that support the Sri Lankan economy. For more than two years, the Sri Lankan government has been forced to push back a lot of funding and subsidies to its people to deal with the pandemic. As a result, the large-scale subsidies given to the people are entirely revoked, making the atmosphere even murkier.

Meanwhile, if examined more in cases of a debt default that occurs in a country, it is also supported by the low level of governance. The IMF (2001) explained that in the Mexican crisis of 1994 - 1995, the market first became uncertain due to the absence of bright spots related to significant developments in economic development, inadequate economic data, hidden weaknesses in the financial system, lack of clarity on government policies, and weak levels of fiscal reporting. Correspondingly, Arbatli and Escolano (2015) found evidence that higher levels of fiscal

transparency were associated with lower debt-to-GDP ratios. The research is also supported by the findings of Glennerster and Shin (2008), which reveal that countries that adopt reforms that increase fiscal transparency are beneficial for countries with smaller and less liquid debt markets.

In addition to fiscal transparency, Friedman et al. (2000) found that corruption was associated with an increase in unofficial activity, leading to a decrease in tax revenues. Harcos et al. (2020) argue that Any increase in surplus depends not only on government measures but also on a known “culture of corruption” and tax invoices. The decline in tax revenue weakens the government's ability to provide public goods; I; encourage the government to increase public debt in financing public goods. Furthermore, Ibrahim (2020) explained that the implementation al policies to reduce fiscal deficits in developing countries did not achieve levels of public debt when corruption was prevalent. Corruption reduces the optimal collection of public income. Thus, adding new taxes or increasing existing tax rates does not result in higher public income in a corrupt country due to tax evasion. Moreover, the government cannot reduce government spending when bribes and rent-seeking projects are widespread in the economy.



Source: World Bank, International Budget Partnership, dan Transparency International, 2022

Figure 2. Public Debt to GDP Ratio, Public Debt to GDP Ratio_{t-1}, Fiscal Transparency, and Middle-Income Countries Corruption Perception Index 2021

Cooray et al (2016) and Benfratello et al (2015) also explained that corruption contributes to increasing national debt. Reducing the level of corruption will minimize the impact of corruption on government debt through government spending. In contrast to that. Correspondingly, Monte and Pennacchio. (2020) also proves that corruption increases public debt and that this effect does not depend on the size of government spending. On the other side, Mehmood et al. (2021) found that in Pakistan, the control of corruption has a positive and significant relationship with public debt; in other words, the increase in government control of corruption causes public debt which also increases.

The relationship between the Ratio of Public Debt to GDP, the Ratio of Public Debt to GDP-1, Fiscal Transparency, and the Corruption Perception Index in 74 middle-income countries in 2021 cannot be interpreted directly only through graphs in each country. Therefore, it is necessary to have a quantitative estimate to determine whether the Ratio of Public Debt to GDP-1, Fiscal Transparency, and the Corruption Perception Index has a positive or negative effect on the Public Debt ratio to GDP in 2021. Thus, the existence of these fundamental factors in a government policy in dealing with the economic crisis and driven by differences in the results of previous research is an exciting thing to study further.

Method

The purpose of this study is to answer the question of whether, in middle-income countries, the factors of the previous year's debt-to-GDP ratio, fiscal transparency, and corruption and partially influence the debt-to-GDP ratio in 2021. This research is a descriptive and quantitative study. This study uses secondary data where the variables are bound to the debt to GDP ratio. The variable free variables are attached to the ratio of debt to GDP in the previous year sourced in the General Government Gross Debt data in the World Economic Outlook published by the World Bank. The free variable of fiscal transparency is sourced in the Open Budget Index (OBI) data published by the International Budget Partnership. The variable corruption indicator is the Corruption Perception Index released by Transparency International.

The scope of the study covers 74 middle-income countries with the observation year of 2021. The method used is OLS regression analysis of cross-section data. To analyze the public debt ratio affected by the debt ratio in the previous year, fiscal transparency, and corruption, it can be formulated as follows:

$$DEBT = f(DEBT_{t-1}, TRANS, CORR) \quad 1$$

From these formulations, the OLS model of this study is as follows:

$$DEBT_i = \beta_0 + \beta_1 DEBT_{i,t-1} + \beta_2 TRANS_i + \beta_3 CORR_i + \mu_i \quad 2$$

Where DEBT = Debt To GDP Ratio (% GDP); $DEBT_{t-1}$ = Previous Year's Debt To GDP Ratio (% GDP); TRANS = Fiscal Transparency Index (Index); CORR = Corruption Perception Index (Index); $i = 1, 2, \dots, n$, indicating the number of cross sections; β_0 = Constant or Intercept; $\beta_1, \beta_2, \beta_3$ = Regression Coefficient; and μ_i = Error Term.

Based on empirical studies that previous studies have carried out, the authors formulated a temporary hypothesis. In 2021, the debt to GDP ratio of the last year partially positively affected the research year's debt to GDP ratio. Meanwhile, fiscal transparency and corruption negatively affect middle-income countries' public debt ratios. Finally, the ratio of debt to GDP in the previous year, fiscal transparency, and corruption simultaneously affect the ratio of public debt to GDP in

middle-income countries in 2021.

The variables bound by the ratio of debt to GDP and the free variable of the ratio of debt to GDP of the previous year in this study used the General Government Gross Debt to GDP in the World Economic Outlook published by the IMF. According to the IMF (2021) Gross debt consists of all obligations that require payment or payment of interest and/or principal by the debtor to the creditor on a later date or date. This includes debt obligations in the form of SDRs, currencies and deposits, debt securities, loans, insurance, pension and standard security schemes, and other accounts payable. Thus, all liabilities in the 2001 GFSM system are debts, except for equity shares and investment funds and financial derivatives and employee stock options. Debt can be assessed at market value, face, or current face (GFSM 2001, paragraph 7.110). The difference between the bound variable of the debt-to-GDP ratio and the free variable of the debt-to-GDP ratio of the previous year is where the debt-to-GDP ratio used in the bound variable is the debt ratio in 2021, while the debt-to-GDP ratio in the previous year is the debt ratio in 2020.

Meanwhile, Fiscal transparency (OBI) is the public availability of budget-related documents, which together provide a complete view of how public resources have been enhanced, planned, and spent during the fiscal year (International Budget Partnership, 2021). The Open Budget Index is the result of a survey based on a questionnaire of 228 questions completed by researchers typically based in the countries surveyed. Almost all researchers come from civil society organizations (most of which have a significant focus on budgetary issues) or academic institutions. The OBI value, which is closer to 100, indicates that the higher the fiscal transparency in a country, and vice versa, the closer to 0, the lower the fiscal transparency in the country.

Finally, the corruption variables in this study use data from the Corruption Perceptions Index published by Transparency International: The Global Coalition Against Corruption. Information Resources Management Association (2018 : 686) The Corruption Perceptions Index is an index that ranks countries "based on the perceived level of public sector corruption, as determined by expert assessments and opinion surveys." The CPI generally defines corruption as "the abuse of power entrusted for personal gain". On transparency international's official website, it is explained that corruption erodes trust, weakens democracy, hinders economic development and further exacerbates inequality, poverty, social divisions and environmental crises. The score of the corruption perception index has a scale of 0–100, the closer the score is to 100, the lower the level of corruption in a country. Conversely, if the index score is closer to 0, the higher the level of corruption in the country.

Result and Discussion

This study uses a statistical descriptive analysis tool consisting of the average value (mean), the most considerable value (maximum), and the smallest value (minimum). In simple terms, the descriptive statistics in this study are shown in Table 1 as follows:

Table 1. Descriptive Analysis

	<i>DEBT</i>	<i>DEBT_{t-1}</i>	<i>TRANS</i>	<i>CORR</i>	<i>EBUDG</i>
Mean	61.786	63.380	46.054	35.446	0.189
Maximum	306.953	304.127	87.000	58.000	1.000
Minimum	9.855	11.473	0.000	14.000	0.000
Observations	74	74	74	74	74

Source: Data processed

Table 1 explain the number of observations used in this study was 74 countries with middle incomes in 2021. The average value of the debt-to-GDP ratio is 2021, which is 61.786 percent. The highest value is Venezuela, which reaches 306.953 percent; in other words, Venezuela has a relatively high risk of failing to pay debts. The lowest in the country of Timor-Leste with a figure of 9.855 percent. Furthermore, 30 out of 74 middle-income countries have an above-average debt-to-GDP ratio.

The average value of the debt-to-GDP ratio for the previous year, namely in 2020, was 63.38004 percent. The highest value is Venezuela, which reached 304.127 percent, meaning that Valenzuela's debt accumulation in the previous year was relatively high, and in 2021, it again experienced an increase of 2.825 percent. On the other hand, the country with the lowest debt ratio value is Timor-Leste, with a figure of 11.473 percent; it decreased the debt-to-GDP ratio in 2021 by 1.618 percent. Furthermore, 32 out of 74 middle-income countries will have an above-average debt-to-GDP ratio in 2020.

The average value of fiscal transparency in 2021 is 46.054 percent. The highest index value is Georgia at 87 percent, meaning Georgia is a country with the public availability of budget-related documents, which provide a complete view of how public resources have been scaled up, planned, and spent during the best budget year, among the other 74 middle-income states. Meanwhile, the countries with the lowest fiscal transparency indexes are Comoros, Equatorial Guinea, and Venezuela, with a figure of 0 percent; in other words, these countries do not provide budget-related documents. Furthermore, 38 out of 74 middle-income countries have an above-average fiscal transparency index. This illustrates that most countries have implemented fiscal transparency.

The average value of corruption in 2021 is 35.446 percent. The highest index value in Costa Rica, which reaches 58 percent, means that Costa Rica is the country that has the lowest level of

corruption among 74 other middle-income countries. Meanwhile, the country with the lowest corruption perception index in Venezuela with 14 percent; in other words, Venezuela has the highest corruption level among 74 other middle-income countries. Furthermore, 25 of 74 middle-income countries have an above-average corruption perception index. This illustrates that many middle-income countries still have high levels of corruption.

Classical Assumption Test

The linear regression model is feasible to use if the model meets classical assumptions and is free from classical assumption tests, namely multicollinearity, heteroskedasticity, autocorrelation, and normality tests. The normality test in this study was carried out by looking at the asym value. The normality test in this study used probability values tested with Jarque-Fallow through a significant level measurement of 5%. The data is said to be normally distributed if the probability value is greater than 5% or 0.05.

Table 2. Result

Variable	Coef (T-stat)
Constanta	3.887 (0.923)
DEBT _{t-1}	0.755 (15.673)***
TRANS	-0.074 (-1.523)
CORR	0.372 (3.359)***
R-Squared	0.837
F-stat	101.258***
<i>Diagnostics Tools</i>	
Normality Test	0.079
Heteroskedasticity Test	0.053
Autocorrelation Test	0.562
Multicollinearity Test	VIF < 10

Source: Data processed

Table 2 shows that the significant level is 0.079 which is above 0.05, so from the results it can be concluded that the data is normally distributed. In this study, transformation was carried out to obtain data normality through data outliers. Through outlier data, data that is not normally distributed can be transformed to become normal. According to Ghazali (2016) outlier data is a case or data that has unique characteristics that look very different from other observations and appear in the form of extreme values.

The multicollinearity test in this study was carried out by looking at the tolerance and variance inflation factor (VIF) values. These two measures indicate which independent variables are described by the other independent variables. The provisions used to indicate the presence of

multicholinerity are $VIF > 10$, indicating high multicollinearity, $VIF 5 - 10$ indicating medium multicholinerity, and $VIF 1 - < 5$, indicating low multicolineritas. The results of the multicholinerity test of this study can be seen in the following table:

Based on table 2, the results of the calculation of the VIF value show that the independent variables, namely the ratio of debt to GDP in the previous year, fiscal transparency and corruption do not have a tolerance value of $1 - < 5$. It can be concluded that the regression model in this study did not occur multicholinerity or with the word there is a low multicholinerity.

Furthermore, to detect the presence or absence of heteroskedasticity in this study, a heteroskedasticity test with the Breusch-Pagan-Godfrey method was used. In the white model, it is known that the chi-count value ($Obs * R\text{-Squared}$) is smaller than the chi-table (where with $df = 3$ and $\alpha = 5\%$) then no heteroskedasticity occurs. The problem of heteroskedasticity can also be seen through the probability value compared to 5%, if the probability value is greater than 5% then there is no heteroskedasticity problem in the data used. The results of the heteroskedasticity test in this study can be seen in the following table:

Based on table 2, it is known that the chi-count value (7.699) is lower than the chi-table value (7.815), and when viewed from the probability where the probability value (0.053) is greater than 5%. Thus it can be concluded that the regression model used is free from the problem of heteroskedasticity.

The autocorrelation test aims to determine the presence or absence of deviations in the classical assumption of autocorrelation, namely the correlation that occurs between residuals in another observation in the regression model. Autocorrelation testing in this study was carried out with the Breusch-Godfrey Serial Correlation LM Test. The results of the autocorrelation test in this study can be seen in the following table:

Based on the results of the Breusch-Godfrey Serial Correlation LM Test test in table 2, it is known that the chi-count value (1.153) is smaller than the chi-table value (11.070) and is supported by a probability value of 0.562 which is greater than 5%. Therefore, it can be concluded that there are no autocorrelation problems in the data used in this study. Through the classical assumption test, it is known that the data used in this study is BLUE so that the resulting estimation results are not biased.

Estimation Results

In the calculations that have been carried out (Table 2), each number, both constants, coefficients, and test results, has its meaning that can be used as a tool for analysis and consideration in making decisions. In Table 6, it is illustrated that the value of the coefficient of the variable debt-to-GDP ratio in the previous year (DEBTt-1) is 0.755, which means that if the ratio

of debt to GDP during the last year is one percent, it will increase the debt-to-GDP ratio by 0.755 percent, assuming the value of the variables of fiscal transparency, and corruption is constant. The relationship or influence between the free variable of the ratio of debt to GDP in the previous year and the variable tied to the debt to GDP ratio is positive. The higher the debt-to-GDP ratio of the last year, the higher the debt-to-GDP ratio.

The value of the coefficient of the fiscal transparency variable (TRANS) is -0.074, which means that if fiscal transparency increases by one unit, it will reduce the debt-to-GDP ratio in 2021 by 0.074 percent, assuming the value of the debt-to-GDP ratio variable in the previous year and corruption are constant. The negative relationship or influence between the free fiscal transparency variable and the debt-to-GDP ratio bound variable. The more the government implements fiscal transparency, the lower the debt-to-GDP ratio.

The value of the coefficient of the corruption variable (CORR) is 0.372, which means that if corruption increases by one unit, it will increase the debt-to-GDP ratio in 2021 by 0.372 percent, assuming the value of the variable debt-to-GDP ratio in the previous year, fiscal transparency are constant. The positive relationship or influence between the free fiscal transparency variable and the debt-to-GDP ratio bound variable. The higher the level of corruption (corruption perception index is close to 0), the higher the debt-to-GDP ratio.

Significance Test

Based on the calculation results in Table 6, it is known that among the four free variables in this study, the debt-to-GDP ratio variable in the previous year and corruption had a significant influence on the debt-to-GDP ratio, where the t-calculation on the debt-to-GDP ratio variable during the last year was 15.67266 and the t-calculation on corruption was 3.359019 are greater than the t-table value of 1.66691. Meanwhile, the t-calculation on fiscal transparency (1.523) is smaller than the t-table (1.66691), showing that these three variables did not significantly affect the debt-to-GDP ratio in middle-income countries in 2021.

On the other hand, the F-statistical value in this study was 101.2584 greater than the F-table value of 2.74, indicating that H_0 was rejected and H_a was accepted. That is, at least one of the β that is not equal to zero; in other words, the variables of debt-to-GDP ratio, fiscal transparency, and corruption are significantly based on the debt-to-GDP ratio in middle-income countries in 2021.

The value of the coefficient of determination (R^2) of 0.837 means that the variation of free variables (variable debt to GDP ratio, fiscal transparency, and corruption) can explain the debt-to-GDP ratio in middle-income countries in 2021 of 83.7% the remaining 16.3% explained by variables other than the debt-to-GDP ratio, fiscal transparency, and corruption.

Effect of Debt to GDP Ratio of the previous year on Debt to GDP Ratio

The calculation results in this study illustrate that the accumulation of debt in the previous year significantly affected the ability to repay debt in the current year in middle-income countries in 2021. In a review of the research year and reflecting on almost the same economic problems of the previous year, Minsky's thinking about debt accumulation is the most appropriate argument because the primary mechanism that causes the crisis is debt behavior. In simple terms, the government's motives for going into debt were influenced by the accumulated deficit in the previous year. This can be caused by debt management that tends to be wrong where the allocation of debt as a source of state revenue is allocated to cover other debts so that instead of providing solutions to debt problems, it creates a new polemic that causes the risk of default to be higher.

In his presentation, Minsky identified three types of debtors: hedge debtors, speculative debtors, and debtors who can no longer pay (Ponzi). Hedge debtor, the principle is a debtor who can make debt repayments well. A speculative is a debtor who can pay debt installments by selling his assets. Ponzi, meanwhile, is a debtor who can no longer afford to pay installments and interest from the cash flow generated from his investment. Once there is a depreciation of their assets, they can no longer afford to pay. Therefore, most economists are very wary of an "economic crisis" due to a large amount of unpaid debt. Because the storm always comes one after another and moves from one place to another in a relatively short period (Prasetyo, 2010). This was also supported by the publication of "Economic consequences of high public debt: evidence from three large scale DSGE models" by the European Central Bank which explained several points, including:

- (i) High levels of public debt make the economy more vulnerable to shocks (crises);
- (ii) High public debt extends the time spent at the bottom zero limits;
- (iii) International overflow increases the time spent at the bottom zero limits for high debt economies;
- (iv) Higher levels of public debt than private debt swarming in the short and long term;
- (v) High public debt limits the scope of counter-cyclical fiscal policy;
- (vi) High government debt impacts potential (long-term) output and is significantly reduced in value in the event of a significant government risk premium reaction, to fund future additional debt burdens. Most types of distortion taxation are used on.

On the other hand, the main additional risks to the debt outlook in 2021 are also supported by weaker-than-expected global growth, increased uncertainty, and increasing protectionism and trade tensions that have lowered commodity prices and exports.

Effect of Fiscal Transparency on Debt-to-GDP Ratio

In this study, fiscal transparency had an insignificant negative relationship with public debt. This is in line with Arbatli and Escolano's (2015) finding that higher levels of fiscal transparency are associated with lower debt-to-GDP ratios. On the other hand, Arabati and Escolano (2015) also explained that fiscal transparency in developed countries significantly affects the debt ratio to GDP. Still, regarding the complete sample and the sample of developing countries, they found evidence that the impact of fiscal transparency on debt was low and did not show statistical significance. The negative relationship between fiscal transparency and the ratio of public debt to GDP is due to a more transparent fiscal system giving policymakers an incentive to adopt responsible fiscal policies.

The insignificant influence of fiscal transparency can be caused by the impact of fiscal transparency that does not directly affect debt. The completeness of documents related to the budget that is not provided is not only directly affecting the reduction of debt but with the entirety of reports about the budget, it can be considered by the government in preparing policies related to the allocation of sources of funds and as calculations related to loans that will be carried out in the next period. Not only that, supervision from the public that can be carried out quite strictly can put pressure on the government in the management and implementation of policies related to budget allocations, thus encouraging the government to be more careful in its debt behavior. Although the level of fiscal transparency in middle-income countries is already relatively high, or in other words, at least half of middle-income countries have implemented fiscal transparency, the IMF (2020) exposes the Bank-Fund's debt sustainability assessment as describing an expansion in the institutional scope of public debt, but recent cases of countries suggest that the risk of contingent obligations may still be underestimated, it underscores the importance of further efforts to strengthen reporting.

Effect of Corruption on Debt to GDP Ratio

This study produced the effect of corruption on the debt to GDP ratio, which is quite contrary to several studies, where the results show that the relationship between corruption and the debt ratio to GDP is positively significant. A low corruption level (high corruption perception index) increases the debt-to-corruption ratio. This phenomenon also occurs in the results of research conducted by Mehmood et al. (2021), where the control of corruption has a positive and significant relationship with public debt. The study explained that political corruption, in particular, harms the fundamental pillars of the state: legislative, executive, and judicial. Moreover, measuring efficiency and effectiveness is not an easy task but a conceptual challenge. The fundamental problem of public spending is that it has many goals. For example, public sector results cannot be

sold in the market, price data is not available, and output cannot be truly qualified. These characteristics of public spending provide fertile ground for corruption.

Furthermore, uncertainty in the rule of law will leave room for corruption, vagueness, and complexity that will also create potential discretion by the authorities. The intention will further lead to corruption through manipulation. In addition, with government actors actively involved in regulatory issues, the potential for corruption will increase rapidly.

Countries should also change their spending structure from one responsible for corruption to one that can be supervised, managed, and implemented more effectively, thus leading to better public debt management. The allocation of government spending and the use of public funds should work towards the goal of improving people's welfare. Poor governance related to public debt can also be overcome by mitigating the nation's shadow economy. This is because tax avoidance by the private sector lowers tax revenues, reducing public income and leading to fiscal deficits. On the other hand, the significant influence of corruption can be also caused by other factors that further affect the debt-to-GDP ratio in 2021.

Conclusion

The world is facing an economic crisis caused by the COVID-19 pandemic. Not a few polemics occur in a country's economy, one of which is related to debt which has increased quite highly in several countries. Although the decline in the average debt-to-GDP ratio is 2021, the risk of debt default in middle-income countries is still high. The debt ratio in the previous year was already quite an irrelatively one of the factors that significantly influenced the high debt-to-GDP percentage in 2021. Meanwhile, an indicators related to governance, namely fiscal transparency are not significant to the debt-to-GDP ratio in 2021. However, that doesn't mean the factor can be wholly ignored; the importance of the government's role in implementing the country's economy and maintaining economic stability can be illustrated through good governance. High levels of transparency, low levels of corruption, and technology use are other critical essentials that governments need to consider.

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