## HOW STRONGLY DOES MILITARY EXPENDITURE IMPACT ECONOMIC GROWTH AND THE EXCHANGE RATE?
### (Empirical Study in Indonesia Using Time Series Data 1999-2021)

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| Article's Information | ABSTRACT |
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| | *One of the fiscal policy strategies used by the government to strengthen the economy and national security is military expenditure. There are many inconsistencies in the results of research examining the influence of military expenditure on economic growth, and it is still rare to find research that validates the influence of military expenditure on the exchange rate. Through time series data in Indonesia during the 1999-2021 period, this research validates the relationship between these three variables using Two-stage Least Square (2SLS) Regression Analysis. The estimation results using econometric models provide empirical evidence of the strength of military expenditure in influencing economic growth and the exchange rate, although the level of influence on economic growth is much higher than the exchange rate. It is recommended that further research carry out a Granger causality test and a Johansen cointegration test to determine the term of the causal relationship between the three variables studied.* |

**Keywords:** *Military Expenditure, Economic Growth, GDP, Exchange Rate*

### ABSTRAK

Salah satu strategi kebijakan fiskal yang digunakan pemerintah untuk memperkuat perekonomian dan keamanan nasional adalah belanja militer. Banyak inkonsistensi hasil penelitian yang meneliti pengaruh pengeluaran militer terhadap pertumbuhan ekonomi, dan masih jarang ditemukan penelitian yang memvalidasi pengaruh pengeluaran militer terhadap nilai tukar. Melalui data time series di Indonesia periode 1999-2021, penelitian ini memvalidasi hubungan ketiga variabel tersebut menggunakan analisis regresi *Two-stage Least Square (2SLS)*. Hasil estimasi menggunakan model ekonometrik memberikan bukti empiris mengenai kuatnya belanja militer dalam mempengaruhi pertumbuhan ekonomi dan nilai tukar, meskipun tingkat pengaruhnya terhadap pertumbuhan ekonomi jauh lebih tinggi dibandingkan nilai tukar. Disarankan bagi penelitian selanjutnya untuk melakukan uji kausalitas Granger dan uji kointegrasi Johansen untuk mengetahui hubungan sebab akibat antara ketiga variabel yang diteliti.

**Kata Kunci:** Pengeluaran Militer, Pertumbuhan Ekonomi, PDB, Nilai Tukar

**Introduction**

One of the fiscal policy strategies the government uses to strengthen the national economy and security is military spending. The economic welfare of society in various countries cannot be separated from historical factors that are significantly related to defense, so aspects of defense have a national impact on the economy or what is called a multiplier effect (Laksmitasari et al., 2021). The relationship between military spending and economic growth is complex (Abdel-Khalek et al., 2020). The economy and military are two factors that support the strength of a nation (Saputro et al., 2021) because the state must provide security to all its citizens. However, military spending as a defense source is important to pay attention to because it is not as productive as the sector. Others include industry, banking, and agriculture (Nugroho & Purwanti, 2020).

The three military indicators include arms imports, exports, and military budget. Weapon imports are a form of military spending that has been proven to affect economic growth significantly (Saputro et al., 2021). Many researchers support these findings, such as the research of Lobont et al. (2019) in Romania using annual data for the period 1991-2016, which also proves the positive influence of military spending on GDP in the long term. The Granger causality test of Laksmitasari et al. (2021) also proves the existence of a causal relationship between economic growth and military spending in Indonesia in 1981-2018 and proves the long-term relationship between the two variables through the Johansen cointegration test. Likewise, the research of Rooney et al. (2021) in the United States also shows the positive influence of defense spending on economic growth. Apart from that, the research of Susilo et al. (2022) on 40 countries with upper to middle-income levels in the 2010-2019 period and the Covid-19 pandemic period, namely 2019-2020 shows that research results show that military spending drives economic growth positively and significantly, even though the pandemic has reduced real military spending. Recent research from Raifu & Aminu (2023) in 14 MENA (Middle East and North Africa) countries during the period 1981-2019 also proves that regardless of the size of military spending and economic growth, increasing military spending has a positive impact on economic growth at various quantiles.

However, several other research results show a gap in results, such as the research of Heliati & Wandiva (2017) in 22 countries in the Middle East, North Africa, and South Asia during the 2000-2014 period, which revealed the negative influence of military spending on economic growth. Findings of Putra et al. (2019) from their research in Indonesia during the 1997-2016 period also prove no causal relationship between defense spending and economic growth. However, there is a unidirectional relationship between defense spending and economic growth.

An empirical gap also occurs in the findings of Abdel-Khalek et al. (2020) in India during the 1980-2016 period, which explains that there is no causal relationship between military spending and economic growth. India has continuously faced regional tensions, which has been a major factor in adopting military strategies and suppressing military capabilities. Meanwhile, the research of Nugroho & Purwanti (2020) in 27 low-middle-income countries for the 2002-2018 period proves that military spending does not significantly affect economic growth.

Another empirical gap also occurs in the results of the research of Azam (2020) on 35 non-OECD developing countries for the 1988-2019 time period, which found a negative impact of military spending on economic growth through the panel autoregressive distribution lag (ARDL) technique which concluded that military spending was not beneficial for the economy, even detrimental. The negative impact of military spending on economic growth was also revealed by Rooney et al. (2021), but if the country has high debt.

The many inconsistencies in the empirical results of the influence of military spending on economic growth provide a research gap to provide additional strong evidence, perhaps in different periods, in different countries, or perhaps additional endogenous decomposition of economic growth, for example, the exchange rate as the research of Miyamoto et al. (2019) which reveals new facts about the negative impact of changes in government spending, especially military spending on exchange rates in developed countries which contradicts the results of tests on the impact of military spending on exchange rates in developing countries which are positive. It is still very rare to find similar research. Thus, this research will reveal the influence of military spending on economic growth and Indonesia's exchange rate through panel data during the 1999-2021 period. Differences in periods, specifications for the country of Indonesia, and testing the impact of military spending on two endogenous factors at once (economic growth and exchange rate) are the main novelties of this research.

The Unitary State of the Republic of Indonesia (NKRI) is ranked ninth as the country with the strongest military power on the Asian continent (Pristiandaru, 2021). Indonesia has been ranked first as the country with the highest military power in Southeast Asia. The Power Index value for Indonesia's military strength in 2022 is 0.2251; the more this number has a value of zero, the stronger the military side is. This index figure is lower than 2021, which was 0.2684. Over the past few years, Indonesia has consistently succeeded in maintaining its position as the country with the highest military power in Southeast Asia and has even continued to strive to increase its military strength globally (Dzulfaroh & Nugroho, 2022). Meanwhile, Indonesia's military expenditure and GDP from 2015 to 2021, as presented in

Table 1, show an increase every year, even though the exchange rate experiences fluctuations.

**Table 1. Indonesia's Military Expenditure, GDP, and Exchange Rate (2015-2021)**

| Year | Military Expenditure (Billion $) | GDP (Billion $) | Exchange Rate (Rp/$) |
|------|----------------------------------|-----------------|----------------------|
| 2015 | $7.60 billon | $860,85 billion | 13391.87 |
| 2016 | $7,40 billion | $931,88 billion | 13307.97 |
| 2017 | $8.80 billon | $1016,62 billion | 13384.82 |
| 2018 | $7.56 billon | $104227 billion | 13884.00 |
| 2019 | $9.00 billion | $11191 billion | 13496.00 |
| 2020 | $9.40 billon | $135896.6591 billion | 13589.96 |
| 2021 | $9.448 billion | $144905.3951 billion | 14490.59 |

Source: Bank Indonesia (2021)

Military expenditure based on Keynesian thinking is one component of the government consumption component where economic stimulation through expanding demand for goods and services, government spending through this side will encourage economic growth through increasing capital availability, output capacity, and profits, which automatically increase investment and output (Azam, 2020).

The amount of government spending in the goods market analysis is included in the government spending component, which will influence the aggregate demand and money market. Output in the aggregate demand approach, as stated by Romer in (Roeger & Herz, 2012) is included in $Y = C(Y) + I(,r) + G + X(e) - M(e,Y)$ revealing that output (national income ) consists of components of consumption expenditure *C(Y)*, investment expenditure *I(Y,r)*, government expenditure *(G)*, trade Balance (difference between exports and imports $X(e) - M(e,Y)$). So, the total differentiation of the equation is written as

$$dY = dC_0 + c_y dY + dI_0 + i_r dr + dG + dX_o + x_e de - dM_o - m_y dY - m_e de \dotfill (1)$$

and changes in the trade balance are formulated as $dBT = dX_0 - dM_0$, so that the equation that expresses the goods market balance can be formulated as follows;

$$(1 - c_y + m_y)dY = dC_o + dI + i_r dr - dG + dBT + (x_e - m_e)de \dotfill (2)$$

The government can sell securities to the general public and the central bank in the domestic market or borrow from abroad.

Meanwhile, from this perspective, the role of money in economic growth, explained by Irving Fishier in the Cambridge equation *(MV=PY)*, shows a positive relationship between the growth of money supply and output. In determining output (GDP) which is based on calculating added value, the link between input and output growth is important to formulate using the Cobb-Douglas production function; $Y = AK^\alpha L^\beta e^\gamma$ where *Y* is Output, *K* = capital and *L* = labor, *e* = exchange rate, includes the Money component in economic growth, the money sector is introduced in the model to analyze the effect of changes in the supply and demand for money on the real sector. The price variable is the first link between the money

sector and the real sector. If the output level is assumed to be constant, then an increase in supply will directly affect prices; with growth patterns, this affects the rate of price changes and changes in output. The second connection is that changes in the supply and demand for money will affect the level of capital accumulation. As well as the Neo-Classical growth model $Y = AK^\alpha L^\beta e^\gamma$ by finding the natural logarithm value, get the output equation:

$$dY = dA + \alpha dK + \beta dL + \gamma de \quad \text{..............................................(3)}$$

In this model, where *dA* will be represented by the size of the human development index (HDI), changes in capital will be proxied by the amount of Foreign Direct Investment (FDI) flowing into the country. It is also assumed that changes in investment are proxied by FDI, while the size of changes in the workforce measures changes in *dL*. The exchange rate variable *(e)* is included as an explanatory variable for the amount of output.

Output based on the aggregate demand approach, which guarantees goods market balance in an open economic system, is written as follows Romer in (Soelistyo, 2017);

$$Y = C\left(Y^d\right) + I(,r) + G + X(e) - M(e,Y) \quad \text{...........................................(3)}$$

This equation reveals that output (national income) consists of components of consumption expenditure $C(Y^d)$, investment expenditure *I(Y,r)*, government expenditure *(G)*, Trade Balance, the difference between exports and imports $X(e) - M(e,Y)$.

The formulation of modeling equations involving joint market balance, namely the formulation of goods market balance equations (IS equation), money market balance (LM equation), and the Neo-classical output function, in a system of equations. Determining the influence relationship between endogenous variables and exogenous variables, as well as endogenous variables as a function of exogenous variables, is formulated as follows;

IS equation: $\left(1 - c_y + m_y\right)dY = dC_o + dFDI + i_r dr - dG + dBT + (x_e - m_e)de$ ..............(4)

LM equation: $\frac{PdM^s - M^s dP}{P^2} = l_y dy + lrdr + lede$ ...................................(5)

The exchange rate variable (e) is included as an explanatory variable for the amount of output so that the equation of the Neo-Classical output growth model is reformulated as:

$$dY = dHDI + \alpha\, dFDI + \beta dL + \gamma de \quad \text{........................................(6)}$$

So, the balance of aggregate demand and aggregate supply is formulated in the following combination of (5), (6), and (7) equations.

**Method**

The data used to estimate the relationship between variables is from 1999 to 2021. The model is based on a balanced system of aggregate demand and supply, where aggregate demand is obtained from the balance of the money market and goods market, with endogenous variables including GDP, deposit interest rates, and exchange rates. Meanwhile, exogenous variables include FDI (foreign direct investment, G (military

expenditure), BT (balance of trade), Ms (money supply growth), P (inflation rate), HDI (Human development index) and L (labor force).

Data sources were obtained from various sources, including the International Monetary Fund, International Financial Statistics, Balance of Payments Years Books Statistics, Various series of Bank Indonesia Reports, Economic and Financial Statistics, and other sources. Through time series data in Indonesia for the period 1999-2021, this research validates the relationship between these three variables using Two Stage Least Square Analysis with the help of E-views software.

**Result and Discussion**

Answer research problems related to the role of changes in the government's military expenditure budget on economic growth and the exchange rate and Indonesian bank interest rates; a macroeconomic model was developed that ensures a balance between aggregate demand and aggregate supply from the aggregate demand side, where control of military expenditure is included in aggregate demand as a result of the derivation of the balance of the goods market and the money market. Meanwhile, economic growth is an interaction of aggregate demand with aggregate supply, so changes in aggregate demand and supply will create changes in GDP or economic growth and exchange rates.

On the other hand, aggregate supply is approximated by the Neo-Classical output function, which describes output conditions that change with the intensification of supply. The balance of aggregate supply with aggregate demand will produce a combination of prices and output levels. The formation of aggregate demand from the interaction between goods market balance (IS press) and money market balance (LM press) and aggregate supply is derived from the Neo-classical output function in a system of equations. Determining the influence relationship between endogenous variables and exogenous variables, as well as endogenous variables as a function of exogenous variables, is formulated as (5) and (6) equations and the growth of Neo-Classical by finding the natural logarithm value you will get (7) equation. So, the balance of aggregate demand and aggregate supply is formulated in the following combination of (5), (6), and (7).

The values of *Y, r* and *e* act as endogenous variables, while the variables *dCo, dFDI, dBT, dM, dP, dL* and *dG* are exogenous variables, the form of the equation is as follows;

$$\begin{bmatrix} 1-c_y+m_y & i_r & -(x_e-m_e) \\ l_y & l_r & l_e \\ 1 & 0 & \gamma \end{bmatrix}\begin{bmatrix} dY \\ dr \\ de \end{bmatrix} = \begin{bmatrix} \frac{dM}{P} - \left(\left(\frac{M}{P}\right)+lp\right)dP & dC_o+dFDI-dG+dBT \\ & dHDI+\alpha\,dFDI+\beta dL \end{bmatrix} \quad \text{......(7)}$$

the determinant value of the matrix above is

$$\Delta= \left(1-c_y+m_y\right)l_r\gamma + i_r l_e + l_r(x_e-m_e) - l_y i_r \gamma \quad \text{..................(8)}$$

The results of the influence of exogenous variables on endogenous variables from the results of the reduced form model can be shown in the following Table 2.

**Table 2. Equation of the influence of exogenous variables on endogenous variables**

| Exogeneous Variable | Endogenous Variable | | |
|---|---|---|---|
| | Output ( dY) | Tingkat suku bunga (dr) | Nilai Kurs Tukar (de) |
| $dC_0$ | $\pi_{11} = \dfrac{l_r\gamma}{\Delta}$ | $\pi_{21} = \dfrac{-i_r\gamma}{\Delta}$ | $\pi_{31} = \dfrac{i_r l_e + (x_e - m_e)l_r}{\Delta}$ |
| $dFDI$ | $\pi_{12} = \dfrac{l_r\gamma + \alpha(-l_r)}{\Delta}$ | $\pi_{22} = \dfrac{-i_r(\gamma + \alpha)}{\Delta}$ | $\pi_{32} = \dfrac{i_r l_e + (x_e - m_e)l_r + \alpha\left((1 - c_y + m_y)l_r - l\right)}{\Delta}$ |
| $dG$ | $\pi_{13} = \dfrac{-l_r\gamma}{\Delta}$ | $\pi_{23} = \dfrac{i_r\gamma}{\Delta}$ | $\pi_{33} = \dfrac{i_r l_e + (x_e - m_e)l_r}{\Delta}$ |
| $dBT$ | $\pi_{14} = \dfrac{l_r\gamma}{\Delta}$ | $\pi_{24} = \dfrac{-i_r\gamma}{\Delta}$ | $\pi_{34} = \dfrac{i_r l_e + (x_e - m_e)l_r}{\Delta}$ |
| $dMB$ | $\pi_{15} = \dfrac{-\dfrac{Z(l_y\gamma - l_e)}{H}}{\Delta}$ | $\pi_{25} = \dfrac{-\dfrac{Z((1 - c_y + m_y)\gamma + (x_e - m_e)}{H}}{\Delta}$ | $\pi_{35} = \dfrac{-\dfrac{Z(-(1 - c_y + m_y)l_e - l_y(x_e - m_e))}{H}}{\Delta}$ |
| $dHDI$ | $\pi_{16} = \dfrac{-l_r}{\Delta}$ | $\pi_{26} = \dfrac{-i_r}{\Delta}$ | $\pi_{36} = \dfrac{(1 - c_y + m_y)l_r - l_y i_r}{\Delta}$ |
| $dL$ | $\pi_{17} = \dfrac{-l_r\beta}{\Delta}$ | $\pi_{27} = \dfrac{-i_r\beta}{\Delta}$ | $\pi_{37} = \dfrac{((1 - c_y + m_y)l_r - l_y i_r)\beta}{\Delta}$ |
| $dp$ | $\pi_{18} = -\dfrac{l_r l_p}{\Delta}$ | $\pi_{28} = \dfrac{-i_r l_p}{\Delta}$ | $\pi_{38} = l_p\dfrac{(1 - c_y + m_y)l_r - l_y i_r}{\Delta}$ |

$$\Delta = (1 - c_y + m_y)l_r\gamma + i_r l_e + l_r(x_e - m_e) - l_y i_r\gamma$$

Source: Derived by the author (2022)

The relationship between military spending and economic growth is positive, meaning that the greater military spending, the more economic growth will increase $\pi_{13} = \frac{-l_r\gamma}{\Delta}$. Meanwhile, interest rates decrease because the *ir* component tends to be negative $\pi_{23} = \frac{i_r\gamma}{\Delta}$ while the exchange rate can be positive or negative and is strongly influenced by the trend of export and import components $\pi_{33} = \frac{i_r l_e + (x_e - m_e)l_r}{\Delta}$. The matrix coefficient is assumed to be greater than zero, so the effect of military spending on economic growth is positive:

$$dY = \frac{l_r\gamma}{\Delta}dC_0 + \frac{l_r\gamma + \alpha(-l_r)}{\Delta}dFDI + \frac{-l_r\gamma}{\Delta}dG + \frac{l_r\gamma}{\Delta}dBT + \frac{-\frac{Z(l_y\gamma - l_e)}{H}}{\Delta}dMB \frac{-l_r}{\Delta}dHDI + \frac{-l_r\beta}{\Delta}dL - \frac{l_r l_p}{\Delta} \dots\dots\dots(9)$$

**Table 3. Estimation results of the influence of Military Expenditure on GDP, BI rate, and Exchange rate in Indonesia 1999-2021 (If analyzed simultaneously with other variables based on the balance of aggregate demand and supply)**

| Exogenous Variables | Endogenous Variables | | | | | |
|---|---|---|---|---|---|---|
| | Log (GDP) | Prob. | BI rate | Prob. | Log (ER) | Prob. |
| C | 20.60516 | 0.4179 | -187.5149 | 0.3081 | 11.45614 | 0.0000 |
| LOG(CONS) | 0.064842 | 0.2384 | 0.127694 | 0.7406 | -1.262734 | 0.1388 |
| LOG(FDI) | 0.050002 | 0.0861 | 0.898374 | 0.0004 | -7.019165 | 0.4177 |
| **LOG(GM)** | **0.131773** | **0.3630** | **-0.383312** | **0.7090** | **-0.756177** | **0.3593** |
| LOG(MB2) | 0.054099 | 0.8343 | -2.224610 | 0.2424 | 0.558047 | 0.2346 |
| LOG(HDI) | 3.068678 | 0.0182 | -19.95465 | 0.0297 | 0.029548 | 0.1161 |
| LOG(DL) | -0.630744 | 0.6638 | 16.23257 | 0.1339 | 2.935842 | 0.0000 |
| INFLASI | -0.017585 | 0.0752 | 0.320174 | 0.0002 | -0.033820 | 0.0607 |
| LOG(BT) | -0.014357 | 0.7391 | -0.393250 | 0.2160 | -0.537534 | 0.5998 |
| R-squared | 0.987640 | | 0.974302 | | 0.947444 | |
| Adjusted R-squared | 0.980576 | | 0.959617 | | 0.917412 | |
| S.E. of regression | 0.101575 | | 0.729458 | | 0.059414 | |
| Sum squared resid | 0.144444 | | 7.449529 | | 0.049421 | |
| Log likelihood | 25.67349 | | -19.67114 | | 38.00754 | |
| F-statistic | 139.8304 | 0.00000 | 66.34811 | 0.000000 | 31.54772 | 0.000000 |

Cons is Consumption; FDI is Foreign Direct Investment; GM is Government Military; MB2 is Wide Money Circulation; HDI is Human Development Index; DL is Labor Change; BT is Balanced of Trade, ER is Exchange Rate

Source: Eviews Software Output (2022)

Table 3. is an Estimated result of the influence of Military Expenditure on GDP, BI rate, and Exchange rate in Indonesia 1999-2021. The estimation results show that military expenditure has an insignificant influence on both GDP and the exchange rate if analyzed simultaneously with other variables based on the balance of aggregate demand and supply, this is because government expenditure has an influence on the balance of output following supply demand analysis. In the realm of demand.

Demand spending together with consumption, investment and the trade balance will shift the aggregate demand curve so that output moves, but on the other hand, increased government spending will encourage a decrease in the exchange rate which results in changes in the value of the trade balance which are marked by a negative trade value.

The influence value can be seen in the investment, consumption, money supply and Human Development Index components, where the influence of all variables is positive, while the negative influence occurs in the inflation component, changes in employment and the trade balance.

**Table 4. Estimation Results of the Effect of Military Expenditure on GDP and Exchange Rate in Indonesia 1999-2021 Partially**

| Coefficient | LOG(GDP) | t-Statistic[*] | LOG (ER) | t-Statistic[*] |
|---|---|---|---|---|
| C | 8.140109 | 7.261486 | 5.034877 | 6.450394 |
| **LOG(GM)** | **0.851356** | **16.81895** | **0.191220** | **5.425284** |
| R-squared | 0.930893 | | 0.583612 | |
| Adjusted R-squared | 0.927602 | | 0.563784 | |
| S.E. of regression | 0.196103 | | 0.136547 | |
| Sum squared resid. | 0.807584 | | 0.391547 | |
| Log likelihood | 5.880247 | | 14.20558 | |
| F-statistic | 282.8769 | | 29.43371 | |
| Prob(F-statistic) | 0.000000 | | 0.000022 | |

if the t-statistic > 1.96 then the exogenous to endogenous effect is significant at 5% sig level

Source: Eviews Software Output (2022)

Data in Table 4. are the result of estimating the impact of military expenditure on GDP and exchange rates partially in Indonesia using time series data for the 1999-2021 period. Based on the data in Table 4., it can be seen that military expenditure has a very important role in increasing GDP (with a contribution of around 93%). Military expenditure also has an important role in increasing the IDR exchange rate against the USD (with a contribution of around 58%).

Apart from that, if we look at the coefficient and t-statistic values, it is known that Military Expenditure (Log(GM)) has a positive (0.851356) and significant effect (t-statistic = 16.81895 > 1.96) on economic growth as represented by the Log(GDP) value, it also has a positive (0.191220) and significant effect (t-statistic = 5.425284 > 1.96) on the exchange rate. This value shows that military expenditure is pushing very strongly in the positive direction of economic growth and the IDR exchange rate against the USD. The higher military expenditure, the higher economic growth, and the exchange rate, although its influence on economic growth is greater than on the exchange rate. The econometric models formed are:

Log (GDP) = 8.140109 + 0.851356 Log (GM) + e ........................................(10)

Log (ER) = 5.034877 + 0.191220 Log (GM) + e. ........................................(11)

**Discussion**

The results of this research prove that in Indonesia, including developing countries, military expenditure has a significant impact on economic growth (GDP) in a positive direction, where the higher the military expenditure, the greater the fulfillment of needs that support the security and protection of the state, the more economic activity will increase in society. Increasingly stimulated and growing. This finding aligns with research of Lobont et al. (2019), proving the positive long-term influence of military spending on GDP.

More consistently, the findings of this research have proven the existence of test results conducted by Putra et al. (2019) through data from Indonesia during the 1997-2016 period and Laksmitasari et al. (2021) during the 1981-2018 period, which shows a unidirectional

relationship strong long-term relationship between economic growth and military spending. This long-term relationship is proven by the estimation results of this research, which uses time series data from 1999 to 2021.

The direction of the influence of military spending on positive economic growth from the results of this research also supports the research of Rooney et al. (2021), Susilo et al. (2022), and Raifu & Aminu (2023). In fact, according to Olejnik (2023), military personnel expenditure has the relatively highest multiplier among disaggregated military expenditures, while the multiplier for military equipment purchases is not as large as military personnel expenditure. This result may have led to forming a nuclear trading network in the European Union (Jang & Yang, 2022).

The results of this research follow the Keynesian view of government spending, which encourages an increase in demand for goods or services produced in aggregate and ultimately triggers economic growth (Soelistyo, 2022 and Pandia et al., 2022). Government spending encourages increased productivity, output, and GDP (Klein & Linnemann, 2023). A government policy in the defense industry sector to collaborate with South Korea to develop fighter aircraft and submarines shows the government's efforts to improve military infrastructure and facilities, automatically increasing military expenditure.

However, the results of this research contradict several previous studies, such as those of Heliati & Wandiva (2017) which show the negative influence of military expenditure on economic growth. The results of this research also contradict the empirical results from Abdel-Khalek et al. (2020), which reveal that there is no causal relationship between military spending and economic growth, as well as the research of Nugroho & Purwanti (2020) which proves the insignificant effect of military expenditure on economic growth.

The results of this research also contradict the findings of Azam (2020) which found a negative impact of military spending on economic growth. Azam also emphasized that military expenditure is not beneficial for the economy and is even detrimental because Azam's research was conducted in non-OECD (The Organization for Economic Co-operation and Development) developing countries that suffer from a scarcity of resources and cannot afford the military. This phenomenon is confirmed by Rooney et al. (2021), who also prove the negative impact of military spending on economic growth, but Rooney emphasizes that this can only happen if the country has high debt. On the other hand, Van et al. (2023) have also proven that military spending can slow down productivity and its decomposition, so countries with low economies need to avoid conflict and military escalation for the sake of the economic future growing and sustainable.

Meanwhile, it is still rare to find research that reveals the influence of military expenditure on the exchange rate. The results of this research reveal a positive and significant effect of

military expenditure on the exchange rate, although the level of significance is not as high as its effect on economic growth. This finding shows that high military expenditure will increase the IDR exchange rate against the USD. High military expenditure shows the government's high attention to national security and defense, increasing foreign trust in Indonesia. National security and defense are important for developing countries to enter an open economic era and strengthen the exchange rate.

The results of this research align with research of Miyamoto et al. (2019), which previously revealed the positive influence of military expenditure on exchange rates in developing countries. However, Miyamoto also emphasized that conflicting results would occur if we looked at the economies of developed countries. Military expenditure will hurt the exchange rate. Miyamoto has validated the depreciation of real currencies in developed countries in response to government spending shocks.

## Conclusion

One of the fiscal policy strategies used by the government to strengthen the economy and national security is military spending. The results of this research prove that military spending has a positive and significant effect on both economic growth (expressed in GDP) and the exchange rate (IDR against USD), although the strength of its influence on economic growth is much higher than on the exchange rate. The higher military spending shows the government's greater attention to national security and defense, thus triggering economic growth and strengthening the exchange rate.

This research only tests the unidirectional influence of military expenditure on economic growth and the exchange rate partially, so further research is recommended to carry out Granger causality tests and Johansen cointegration tests to determine the term of the causal relationship between the three variables studied. Apart from that, further research can also test this relationship in countries in Southeast Asia in aggregate so that differences in results between countries can be identified.

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