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Economic impact of military spending on GDP growth in Morocco (4B)

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Abstract

This study examines the relationship between military spending and the GDP growth rate in Morocco, drawing on both the Military Keynesianism theory and the crowding-out theory. The Military Keynesianism theory suggests that increased military expenditure can stimulate economic growth by boosting demand through government spending. This, in turn, leads to increased industrial activity, job creation, and overall economic output. On the other hand, the crowding-out theory posits that high military expenditure can reduce resources available for other economic activities, potentially limiting growth. This study aims to evaluate these theories in Morocco by analyzing the correlation between military expenditure and GDP growth. To evaluate this relationship, we used several key variables: foreign direct investment, trade balance, population, and military expenditure. By analyzing data from 1976 to 2015 using linear regression and Granger causality tests, the results indicate that while GDP growth can cause increase in military expenditure, the reverse is not necessarily true in the case of Morocco. Moreover, the econometric model shows that military expenditure is a statistically significant predictor of GDP, while other control variables do not significantly impact economic growth. The findings reveal that a 1% increase in military expenditure leads to a 0.329% increase in GDP growth rate.

Key words: Military expenditure; Defense spending; Economic growth

Discussion

The relationship between military expenditure and economic growth in Morocco, particularly from 1976 to 2015, has not been thoroughly studied. Our research contributes valuable insights to this subject by providing additional results. Findings reveal that the Moroccan economy responds positively to increases in military spending, with a 1% rise in military expenditure leading to a 0.329% growth in GDP. Furthermore, the causality seems to

run from GDP to military spending, indicating that economic growth drives increased defense expenditure.

Our conclusions align with the concept of adaptable defense policy discussed by Das et al. (2015). We found that economic growth drives changes in military expenditure, supporting the idea that defense policy can adjust in response to shifts in economic conditions.

Moreover, Farzanegan (2014) identified a similar positive relationship between military spending and economic growth. However, the direction of causality differed in their study, as they found that increased military spending led to economic growth in Iran.

This result is particularly interesting when considering the findings from Dunne et al. (2005), which suggests that threat levels, described in the Barro model, can influence economic output. In other words, a country with a high threat level may exhibit a positive relationship between military spending and economic growth, while the opposite effect could occur when the threat level is low. This insight may shed light on our results, as Morocco's involvement in a prolonged conflict has likely led to a higher threat level, influencing its economic dynamics.

A study by Abu-Bader and Abu-Qarn (2003) in a similar region and timeframe revealed a negative relationship between the variables of interest, which contrasts with our findings. This discrepancy could be understood through the crowding-out theory, which states that military expenditure diverts resources away from other parts of the economy. For instance, during periods of conscription, individuals who previously worked in factories are instead conscripted into the military, potentially causing a decrease in industrial output. However, it's important to note that military spending can also yield additional externalities, such as the development of the internet by the U.S. Army in the 1960s.

The differing outcomes suggest that the impact of military spending on an economy varies across countries and depends significantly on the historical context and level of development of the country, underscoring the importance of employing more nuanced

evaluation methods, beyond those presented in our paper, to understand these effects more accurately.

Implications

The positive relationship between the studied variables may be attributed to Morocco's economic landscape. High unemployment creates opportunities by stimulating the military sector, which, in turn, generates spillover effects throughout the country. Given Morocco's ongoing conflict with the Polisario Front, the perceived threat level is likely high, further reinforcing the observed positive correlation.

The findings are significant for decision-makers in Morocco because they reveal that, despite the inverted causal relationship between the variables, military expenditure can still predict GDP growth. This insight is critical and should be considered when formulating new policies for conflict-affected regions or when evaluating existing regulations regarding military spending in Morocco.

While current levels of military expenditure in Morocco may serve as a reliable predictor of GDP growth, it is crucial to consider the causality in this relationship. Our findings indicate that the performance of Morocco's economy strongly influences its military spending in any given year. Addressing security concerns requires maintaining a positive outlook on economic activity, which in turn could justify increasing the defense budget to enhance overall national stability.

Limitations

The limitations of our research include a small number of control variables, a relatively short time period, and the absence of dummy variables to account for significant historical events that could have impacted military expenditure. These constraints restrict our ability to fully understand the effects of such events on the variables studied.

Augmented Dickey-Fuller test and Granger causality test may not be the most effective approach to determine the direction of causal effects. In their paper, Dunne and Smith (2010) highlight the limitations of the Granger causality test when analyzing the impact of military expenditure on a country's economy.

The existing timeframe of our study does not account for the recent resurgence of the conflict between Morocco and the Polisario Front in 2020. This significant event, which led to increased military spending, could have influenced the outcomes of our research.

Suggestions for Future Research

Firstly, further research should focus on evaluating alternative models that could more accurately assess the impact of military expenditure on a specific country's economy. The limitations of the Granger causality test emphasize the need for improved methods to measure causality effectively.

Secondly, it would be valuable to separately study the effects of significant historical events in Morocco, laying a theoretical foundation for comprehensive econometric analysis that incorporates qualitative data. This approach could offer deeper insights into the impact of military expenditure within its specific historical and socio-political context.

Lastly, the application of the Barro model, as discussed previously, could provide valuable insights into how threat levels can be measured and their impact on economic output at a given level of military expenditure.

By combining advanced causality estimation techniques with a thorough qualitative foundation including political, social, and economic dynamics, along with accurate representation of threat levels we could derive more robust conclusions and possibly reach different findings from those currently established.

Conclusion

Our research examined the impact of military expenditure on Morocco's economic growth from 1976 to 2015. Results indicate a positive and statistically significant relationship. However, the direction of causality flows from economic growth to military expenditure, meaning that Morocco's economic conditions significantly influence the level of military spending in a given year.

To conclude, it's important to recognize that peace and defense economics is a complex field that requires comprehensive analysis from multiple perspectives. Our study was limited to a timeframe that may not have been sufficient to draw robust statistical conclusions, and we did not account for significant historical events that could have influenced our findings. Cultural factors, the political landscape, and international relations have all shaped Morocco's economic development, indirectly affecting military expenditure and its role in the Moroccan economy. Therefore, we encourage readers to explore these factors separately to gain a deeper understanding of the impact of defense spending in Morocco.

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