The Impact of the Arms Race on the Economic Growth of the United States and Russia

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Abstract
The arms race between the United States and the Soviet Union (Russia) during the Cold War had a significant impact on the economic growth of both superpowers. This study examines how the allocation of vast resources for military purposes and threats affected other sectors of the economy. By analyzing historical data on military spending, industrial production, investment, and GDP. The research found that the arms race puts huge pressure on the state budget and creates a trade-off between military spending and investment in productive sectors, which ultimately hampers long-term economic growth in both countries. This study uses secondary data such as journal books, reports from Publish or Perish, Google Scholar, related and relevant websites regarding the arms race and its impact on economic growth through the library research method. The data collection technique used is data triangulation. The purpose of this research is to analyze the impact of the arms race between the US and Russia on the economic growth of both countries. Therefore, it is expected to provide insight and reference for the government in formulating policies regarding the arms race carried out by other countries. The results of this study found the negative impact of the arms race and the importance of placing resources wisely for sustainable economic growth. The impact of the United States and Russia’s arms race can hamper long-term economic growth and welfare levels in both countries. Therefore, diplomacy of international cooperation and de-escalation of tensions are necessary to avoid an arms race due to uncontrolled increase in military spending

Keywords: Arms Race, Economic Growth, Military Spending, Political Tensions

INTRODUCTION

The arms race between the United States and Russia during the Cold War was a competition for military supremacy that increased tensions between the two superpowers. It was characterized by the rapid development and stockpiling of nuclear weapons, as well as advances in conventional military capabilities. It is one of the most significant geopolitical phenomena in modern history and has lasted for decades. One of the main aspects that led to the arms race was ideological and geopolitical competition (John M. Treddenick, 1985). Both countries are trying to develop their nuclear weapons and advanced military technology to show strength, as well as efforts to strengthen their strategic position and expand their global influence (Fithrah Abdul Malik, 2023).

An arms race is a phenomenon in which two or more countries compete intensively over the development, production, and acquisition of weapons and military technology. The purpose of this arms race is to increase the military power of a country in the hope of creating a balance of power or military superiority over its competitors (Djamarel Hermanto, 2023).

The arms race is often triggered by factors of political tension, state security threats, ideological competition or a desire to maintain or improve a country's strategic position at the world level. There is an impact that occurs from this arms race, where the countries involved must allocate resources in a very large budget for the development and production of weapons and military technology in the country. This will certainly affect overall economic growth and state budget allocations (Herman Schwartz, 1998)
Although the Cold War ended in 1991 with the collapse of the Soviet Union, the economic arms race of the time is certainly still felt today. The huge military budget expenditures during that period had significantly drained the economic resources available to both countries. As the Cold War unfolded, the United States experienced increasing budget deficits and massive government debt, while the Soviet Union experienced economic stagnation that contributed to the collapse of its regime. (Stefan Hedlund & Niclas Sundström, 1996).


Based on the graph above, the United States has experienced a significant increase in defense spending. According to data from the Stockholm International Peace Research Institute (SIPRI), US defense spending in 2022 will reach $876.94 (billion) (Nan tian et al., 2024). This is due to the war between Russia and Ukraine, and the escalation of tensions in the South China Sea. Meanwhile, Russia's defense budget reached $86.4 billion in 2022 (Diego Lopes da Silva, 2022).

Defense budgets globally, continue to grow and have increased by 19% between 2013 and 2022. The defense budget has continued to swell and increase every year since 2015. The increase in defense budgets in the world today is due to recent conflicts. Thus, encouraging many countries to strengthen their country's defense and increase the military defense budget (Cindy Mutia Annur, 2023).

In an ideal situation, the allocation of economic resources used for an arm race incurs significant opportunity costs. These resources could have been utilized for more productive purposes and could have maximally contributed to long-term economic growth and societal development. As countries engage in competition to build up their military capabilities, they divert funds, technology and human resources from investments that could otherwise improve infrastructure, education systems, health services and other sectors that are more important for sustainable economic progress (Robert J. Barro, 1991).

National security is undoubtedly more important, but it is important to consider the costs of engaging in an arms race. Resources used to build up the military could have been directed towards productive endeavors such as infrastructure development, improving education, and diversifying economic sectors. By prioritizing investments that support long-term growth and public welfare over short-term military expansion, a country can surely create a more stable and prosperous future for its citizens (Robert J. Barro, 1991).

Superpowers should ideally be able to maintain security without sacrificing economic prosperity. But in reality, excessive spending on military purposes can lead to deficits in fiscal policy, opportunity costs of productivity, as well as inflation and instability in the national economy. The impact will vary depending on the conditions and government policies in each
country. Therefore, ideal defense spending should be optimized so as not to jeopardize a country's long-term national economic growth (Dunne, 2011). This study uses the theory of economic growth according to the Keynes school, military spending can increase and encourage economic activity in the field of goods and services produced, so that the country's economy in aggregate can encourage economic growth (Korinti Venesia Pandia et al., 2022). In addition, using public expenditure theory related to public expenditure budgets including defense spending on national economic activities such as economic growth, inflation, and unemployment rates in a country.

Although the economic impact of the arm race has become an interesting research topic, there are still gaps in the existing research. Most of the previous studies only focused on the impact of military spending on the economy in general, without taking into account specific factors related to the arms race between the United States and Russia (J. Paul Dunne & Nan Tian, 2013). In addition, most of the research was conducted before or immediately after the end of the Cold War, thus not reflecting current conditions and possible long-term impacts. According to previous research (Michael D. Ward & David R. Davis, 1992), analyzing the economic growth of the United States and Russia during the Cold War, so this can affect defense budgets in the world.

This study aims to analyze the impact of the arms race between the United States and Russia on the economic growth of the two countries, both in the short and long term. It is necessary to further understand how the arms race can evaluate specific factors associated with the arms race, such as resource reallocation, budget deficits, and geopolitical instability, as well as quantify the impact on economic growth that occurs from the arms race affecting economic stability.

Through this research, a deeper understanding of the economic impact of the arms race between the United States and Russia is expected. By understanding this research gap, researchers can identify better solutions to maintain the security of the country without having to sacrifice the prosperity of society. The results of this study can provide valuable insights for policymakers and academics in understanding the economic consequences of geopolitical conflict and military competition. In addition, this study can also highlight the importance of maintaining a balance between national security and sustainable economic development, and encourage efforts to promote global peace and stability for long-term economic growth. So that it can be expected to provide insight and reference to the government in making policies related to the arms race carried out by other countries.

**RESEARCH METHODS**

Research methods are used to understand the subject of this research. This method will guide researchers throughout the research process, including the techniques and procedures used. (Sugiyono, 2013), states that research methods can be defined as scientific ways to obtain valid data with the aim of discovering, proving, and developing knowledge so that in the end it can be used to understand, solve, and anticipate problems. This research uses a descriptive qualitative method which is research based on the philosophy of postpositivism used to research on natural object conditions where the researcher is the key instrument. This research uses secondary data with a literature study approach such as books, teaching materials, journals and reports sourced from Publish or Perish, Google Scholar, related and relevant websites regarding the arms race and the impact on economic growth (J.Moleong Lexy, 2002), Data collection techniques are techniques or ways of collecting related and relevant information data so that it is needed in research. The data collected is to answer questions, this is done by triangulating the data. Data
triangulation is a data collection technique that combines various data and sources that already exist to check the validity of existing data.

RESULT AND DISCUSSION

Result

Based on the results of the analysis, journal searches and online news conducted, it shows that there is an increasing increase in the defense budget expenditures of the United States and Russia. According to the Keynesian school (Korinti Venesia Pandia et al., 2022), the view is that increased government spending will encourage an increase in demand in the field of goods and services produced in aggregate so as to encourage economic growth. However, in military budget spending, especially in developing countries, it shows that the level of national economic development, given by the standard per capita income, and has no effect on military budget spending. However, this positive impact is only temporary.

According to the book (Raimo Väyrynen, 2023) published on SpringerLink, the fluctuations in the arms race are a result of the long waves of economic development and transitions of power in major countries that occurred in the nineteenth and twentieth centuries. Some previous research (University of Malaya, 2017), suggests that military budget spending can increase business confidence, especially in countries in conflict, facilitating physical investment and economic growth. But there are also studies that find that high government spending on military technology development will reduce macroeconomic growth because it has shifted spending on the social welfare of society and investment in economically productive sectors in a country.

After the collapse of Russia or the Soviet Union, globally entered a new era with many emerging threats in developing countries such as transnational regional networks and regional conflicts that can create enormous fiscal pressures (Revo M, 2024). Although military spending can provide a short-term boost to the national economy through increased state consumption, investment, and the development of technological innovation. However, it creates significant fiscal pressure on the country.

After the cold war, many developing countries in the East Asian region saw their economic growth status rise from middle-income to upper-middle-income, thus gaining greater fiscal capacity to develop military innovation and technology. (University of Malaya, 2017).

Discussion

The arms race between the United States and Russia is currently on the rise (Lyle J. Goldstein, 2021). Both countries have seen an increase in military budgets for the development and testing of new weapons. For example, Russia recently announced the suspension of its participation in its main nuclear arms control treaty.
The diagram above shows an increase in military spending. According to a report by the Global Power website, the most powerful military force in 2022 will be the United States, with Russia taking third place. (Maria Ulfa, 2022).

**Comparison of the Military Power of Russia and the United States in 2022**

Based on a report from the Global Power website (Maria Ulfa, 2022), The United States has 1,810,000 military personnel (1,390,000 active and 420,000 reserve personnel), while Russia has 1,350,000 million military personnel (850,000 active and 500,000 reserve personnel). While the strength of military aircraft owned by the United States is 13,247 units of military aircraft, including 1,957 units of fighter jets. Meanwhile, Russia has 4,173 military aircraft, including 772 fighter jets. This arms race is not only limited to the defense budget and military power of the country, but certainly involves political strategies in terms of diplomacy for the interests of the country in the international realm. For example, the current conflict between Russia and Ukraine has triggered a strong reaction from the United States and its allies. The Russia-Ukraine war and the escalation of tensions in the South China Sea are to blame. Nearly 40% of global military spending is allocated by the United States. The United States is the most powerful country because it often takes a leading role in international organizations, and is the founding force behind institutions such as the United Nations (UN), NATO, and the World Bank.

A recent report by the International Peace Research Institute (SIPRI) in Stockholm (Cindy Mutia Annur, 2023) shows that the global military budget reached $2.24 trillion in 2022, the highest amount ever recorded by SIPRI and an increase of 3.7% per year from 2013 to 2022. This budget has continued to increase every year since 2015. Last year's global military budget soared due to the cold war, prompting many countries to increase their military budgets. According to SIPRI’s Trends In World Military Expenditure 2022 report, Russia’s invasion of Ukraine was the main driver of growth in military spending in 2022. Military budgets in Europe are recorded to increase by 13% annually (yoy). By 2022, Russia has a military budget of US$86.4 billion, up 9.2% annually, which is the largest increase of any European expenditure after the cold war. According to SIPRI, “The extraordinary growth is largely due to substantial increases in Russian and Ukrainian (military) spending, but many other European countries are increasing their military budgets by 2022.” However, the United States remains the country with the largest military budget in the world in 2022. According to SIPRI, the five countries with the world's largest military budgets account for 63% of the world's total military budget in 2022.

**The Impact of the Arms Race on the Economic Growth of the United States and Russia**

Russia's decision to invade Ukraine in 2022 has sparked a military conflict that has led to a surge in defense spending. (The Economist, 2022). An arms race can cause a country to experience a budget deficit. As happened, the United States defense budget reached US$ 886 billion or the equivalent of Rp. 13,715.28 trillion, which has been approved by the defense policy by US President Joe Biden. (Mae, 2023). In the 2024 state budget (APBN), which amounts to IDR 3,325.1 trillion, this budget has almost quadrupled. According to data from the Department of Defense (DoD), the US military budget has increased by 29% compared to the time before the COVID-19 pandemic or 2019. This increase is due to the US’ involvement in multiple wars and the struggle to keep pace with emerging powers, such as China in the Indo-Pacific.

In the United States, the defense budget deficit is expected to rise due to increased military aid to Ukraine and other NATO allies. This risks increasing inflation and interest rates on US sovereign loans. However, the impact on US economic growth is expected to be limited, as the developed economy is large in size and has a strong innovation system (The Economist, 2022).

As a result, the arms race between the United States and Russia is on the rise again, Russia's US$ 886 billion military budget will be used for the modernization of its nuclear program and the development of military technology, as well as the purchase of a diversified war
fleet and policy support for strategic partners. The budget includes a US$30 million Ukraine security assistance initiative. The program will end on September 30, 2024. A report by the Stockholm International Peace Research Institute states that global military budgets in 2022 will reach US$2.240 billion, with the US accounting for 39 percent of the total (Mae, 2023).

Russian President Vladimir Putin has approved an increased budget for the war (Irene Sarwindaningrum, 2023). As the war in Ukraine escalates, Russia will allocate 40% of its national budget to defense and security. This new budget increases by about 25% compared to the previous national budget in 2022, and even increases by almost 70% in 2024 for defense and law enforcement, reaching $36.6 trillion rubles or $415 billion US. As a result, the budget deficit will reach $1.5 trillion or about $9.5 billion. This budget is intended to fund military power. In addition, the budget went up to mitigate the effects of international sanctions imposed on Russia after it attacked Ukraine. The economic sanctions imposed by Western countries prevent Russia from trading internationally. As a result, national commodity prices are lower than the market prices of other commodities, such as oil.

While military spending can provide a short-term boost to the economy through increased consumption, investment and technological innovation, it also creates significant fiscal stress. Excessive spending on costly defense programs such as the Strategic Defense Initiative and nuclear weapons modernization has created enormous fiscal pressures, especially with regard to the government budget and fiscal deficit (University of Malaya, 2017). The fallout from the arms race means that the negative impact of the 2023 surge in military budget spending may be felt more by Russia than the United States. But both need to remain vigilant so that the increase in defense spending does not put a long-term burden on the budget that could disrupt fiscal stability and economic growth.

In contrast, the Kremlin can overcome the domestic impact of the economy’s shift to defense through Russia's high social spending and low unemployment rate. (Irene Sarwindaningrum, 2023). Richard Connoly, an expert on the Russian military and economy at the Royal United Services Institute in London, argues that the budget increase is aimed at ending the war in Ukraine. In addition, it seems that Russia is preparing itself for a long-term military confrontation with the West.

This amounts to a re-militarization of Russian society, with most domestic companies in Russia turning to making tools of war. One of them is a home-based bread business that is now being asked to make drones. The Tambov bakery, located about 400 kilometers from Moscow, now produces 250 drones per month from 30 tons of bread. According to (The Economist, 2022), The transfer was made at the request of the Russian military, so the drone was made by changing some of the production machinery. The development of military weapons consumes resources, which can reduce the resources available for the development of infrastructure, health, education, and other sectors that are important for the country's economic growth. It can divert attention from developing other productive sectors (Fithrah Abdul Malik, 2023).

This arms race may trigger countries that compete in weapons may seek to improve and develop more sophisticated and lethal weapons against their country’s opponents (Shafa Nabila Syaharani, 2023). This inevitably increases interstate tensions and global security, risking unintended political and economic conflict between the countries involved. Due to high miscommunication between countries with large nuclear arsenals, there are negative impacts arising from the arms race including the potential waste of funds if the arms race stops, which will have an impact on developing countries that are forced to import weapons.

**Possible Efforts to Stop the Arms Race Between the United States and Russia**

Although the arms race that took place between the United States and Russia several decades ago ended with the collapse of the Soviet Union, the impact of the arms race itself still exists and many countries still have nuclear weapons (Shafa Nabila Syaharani, 2023). Efforts in
arms control and disarmament are very important to overcome the negative impacts that arise so as to create a more peaceful world without political and economic conflicts. To prevent the spread of nuclear weapons and promote disarmament, various treaties have been signed, including the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), the Comprehensive Nuclear Test Ban Treaty (CTBT), and the Strategic Arms Reduction Treaty (START). However, the international community must work together to promote arms control and disarmament and prevent the trade in nuclear weapons.

Diplomatic approaches were used to counter NATO countries that disagreed with the President's policies. In addition, they built a framework of cooperation with non-nuclear states to warn nuclear-developing states of the possible negative consequences that irresponsible nuclear development could bring (Mohamad Anthoni, 2019). The importance of building and strengthening international cooperation to prevent the global spread of weapons and military technology, as well as oversight and transparency in weapons development and deployment.

The way to stop the arms race is to raise awareness of the importance of education about the dangers of the arms race and the importance of global peace and stability (Mohamad Anthoni, 2019). Reintroducing sustainable economic development as an alternative to the arms race, with stable economic growth, many countries may be more inclined to invest in productive sectors in the country rather than in arms development.

**CONCLUSION**

The arms race between the United States and Russia has a significant impact on both countries. The surge in military spending in the short term can spur fiscal stimulus and increased domestic demand. Meanwhile, in the medium term, the impact of the arms race is that the burden of a bloated defense budget is expected to be detrimental to both countries. The new arms race risks depressing economic growth and welfare in both countries in the medium to long term. Such impacts include budget deficits, diversion of focus from other important sectors, increased political and economic conflicts, and triggering further arms races. Nevertheless, the United States remains the world’s number one arms exporter.

Based on the explanation above and previous research related to the impact of the arms race on the economic growth of the United States and Russia, there are several recommendations for further research that can be done:

1. Conduct a quantitative analysis of long-term impacts Most previous studies have focused on the impact of the arms race on economic growth in the short term or the Cold War period itself. Future research can be conducted to analyze the long-term impact of the arms race, especially after the end of the Cold War. Quantitative analysis can be conducted to measure the impact of the arms race on the economic growth of the United States and Russia in recent decades, taking into account other factors such as globalization, technological change, and domestic economic policies.

2. Conduct comparative economic impact research across sectors, Future research could focus on the impact of the arms race on specific economic sectors in the United States and Russia. For example, how the arms race affects the defense industry sector, the manufacturing sector, or the information technology sector. This analysis can provide deeper insights into more specific economic impacts and help in making more targeted policy decisions.

3. To broaden the perspective and increase the generalizability of the findings, future research could compare the economic impact of the arms race between the United States and Russia with other countries engaged in significant military competition, such as China, India, or countries in the Middle East. This comparative study could reveal patterns or factors that

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influence the economic impact of the arms race across different geographic and political contexts.

4. Analyzing social and environmental impacts In addition to economic impacts, future research could also explore the social and environmental impacts of the arms race between the United States and Russia. For example, how the arms race affects people's welfare, resource distribution, or environmental degradation. This research could provide a more holistic perspective on the consequences of the arms race and encourage more sustainable policies. The above research recommendations can contribute to a more comprehensive understanding of the economic impact of the arms race between the United States and Russia, and provide valuable input for policymakers and academics in their efforts to promote sustainable economic development and global peace.

REFERENCES


