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RESEARCH ARTICLE

Economy in the Childfree Era: A Comparative Study of Japan and Indonesia

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Abstract: The study provides valuable insights for policymakers and academics, as well as contributing to literature on demographic economics and sustainable development. The study investigates the economic impact of the childfree trend in Japan and Indonesia, two countries with differing demographic profiles and economic challenges. This study employs a qualitative research method with a comparative descriptive approach, utilizing secondary data from national statistical reports, academic research, and official publications. The results reveal that Japan's declining birth rates and aging population lead to a decrease in productivity and a labor shortage. Conversely, Indonesia faces challenges of poverty, unemployment, and pressure on natural resources despite its large young population. Major findings suggest that Japan needs to reform its family policy and increase labor force participation. In Indonesia, sustainable population management and the exploitation of demographic dividends are crucial for economic growth and poverty reduction.

Keywords: Childfree, Japan, Indonesia, Economic growth

1. INTRODUCTION

The decision not to have children, or what is known as the term childfree, has become an increasingly common phenomenon in various parts of the world (Volsche et al., 2020). These trends have broad and profound implications for the demographic structure and economic dynamics of many countries. In this context, Japan and Indonesia offer intriguing case studies because they both have very different demographic characteristics and economic challenges. Japan, which has experienced a decline in birth rates and an increase in the elderly population, faces a serious challenge in long-term economic growth (Nguyen, 2020). On the other side, Indonesia, with its large and young population, is facing poverty, pressure on natural resources, and environmental pollution (Yulin & Dita, 2022). Thus, a comparative analysis of the impact of having no children decisions in both countries can provide valuable insights for policymakers and academics.

In Japan, birth rates have declined significantly over the last few decades. According to data from the Japan Statistics Agency, the birth rate in Japan dropped to 1.36 children per woman in 2023 and 2024, which is one of the main causes of this population decline (Japan Statistics Bureau, 2024). The continued decline in the population from year to year reflects the cumulative impact of low birth rates and an increasing number of elderly people, with higher deaths than births. This condition creates a shortage of young labor, which in turn affects the productivity and ability of the country to sustain long-term economic growth (Lin et al., 2020).



On the other side, Indonesia faces a different challenge. Indonesia, with a population of more than 270 million by 2023, will have the fourth largest population in the world (United Nations Population Division, 2024). With over 40% under 25, the population is young (Badan Pusat Statistik, 2024). While this young population offers huge potential for economic growth, it also carries significant challenges related to poverty, unemployment, and pressure on natural resources. According to the BPS report (2020), Indonesia's poverty rate will reach 10.4% of its total population by 2020 (BPS Indonesia, 2020). The high birth rate and a lack of adequate jobs are the primary drivers of this poverty rate.

Although these two countries face different challenges, both can draw valuable lessons from the decision not to have children in their respective contexts. To tackle aging populations and shortages of young labor force in Japan, a holistic approach is required, including family policy reform, increased participation of women and older workers, and the adoption of appropriate technologies to increase productivity. In Indonesia, managing large young populations in a sustainable way is key to reducing poverty and boosting economic growth. The decision not to have children can help reduce the pressure on natural resources and provide opportunities for families to improve their quality of life.

In this context, the study aims to conduct a comparative analysis of the economic impact of decisions not to have children in Japan and Indonesia. The study employs the Economic Growth Theory as a theoretical basis to investigate how demographic change affects the factors driving economic growth in both countries (Romer, 1986). Thus, this study will analyze how decisions not to have children affect labor market dynamics, productivity, and consumption patterns in Japan and Indonesia.

Specifically, the study will explore the impact of a decision not to have children on the dynamics of the labor market in Japan, including how a shortage of young labor affects productivity and key economic sectors such as technology and manufacturing. In Indonesia, the study will explore the potential benefits of decisions not to have children in a younger demographic context, including how these decisions can reduce poverty, increase labor participation, and reduce the pressure on natural resources.

In Japan, understanding the impact of childfree decisions is crucial to developing policies that can address labor shortages and support sustainable economic growth. In Indonesia, the research is important to help governments and policymakers formulate strategies that can optimize young demographic potential and reduce pressure on economic resources.

By conducting this comparative analysis, the study hopes to provide valuable insights for policymakers, academics, and researchers in understanding the economic implications of childfree decisions and formulating effective policies to address future demographic challenges. Furthermore, the study aims to enhance the academic literature on demographic economics and establish a foundation for future research in this field.

2. Literature Review

Nguyen (2020) explores the effects of population aging on Japan's economy and society, as well as proposed solutions to address these challenges. This study presents a comprehensive analysis of how the aging population affects Japan's economy, including potential reductions in productivity and increased burdens on social welfare systems. Nguyen suggests several solutions to mitigate these challenges, such as reforming pension policies and enhancing labor participation, especially among women and the elderly (Nguyen, 2020).

Furthermore, Lin et al. (2020) examine the impact of low fertility in East Asia with a focus on Japan. This study highlights the management crisis Japan faces due to low fertility levels, including the challenges to economic and social sustainability. Lin et al. discuss various strategies and policies that Japan has implemented to cope with the fertility crisis, as well as

the effects of these policies on the country's demographic and economic structure (Lin et al., 2020).

In a related study, Nugroho et al. (2022) investigate the trends of childfree and unmarried individuals in Japan and their impact on labor and the economy. This study provides insights into how these lifestyle choices affect the workforce and economic dynamics, further contributing to the understanding of demographic and economic trends in Japan (Nugroho et al., 2022).

Turning to Indonesia, Taebenu (2020) examines the implications of choosing a childfree lifestyle. This research indicates that individuals who opt for a childfree lifestyle may experience increased personal well-being and a reduction in family economic burdens. By choosing not to have children, individuals can alleviate pressure on the social and economic systems of the country, allowing them to focus more on personal and professional development without the additional responsibilities of family (Taebenu, 2020).

Juned (2016) also explores the economic and demographic impacts of choosing a childfree lifestyle in Indonesia. His study finds that such decisions can help reduce demographic pressures and bring about economic benefits, such as improved individual well-being and decreased family economic burdens. Additionally, Juned's research delves into the environmental implications of high population density, suggesting that a lower birth rate could mitigate pollution issues and subsequently improve the overall quality of life for Indonesian society (Juned, 2016).

These studies collectively provide a nuanced understanding of the economic and demographic impacts of childfree choices and aging populations in Japan and Indonesia. They underscore the importance of considering both individual and societal perspectives in addressing demographic challenges and formulating effective economic policies.

3. Research Method and Materials

The study uses qualitative research methods with a comparative descriptive approach to analyze the impact of childfree decisions on the economies of Japan and Indonesia. The data used include demographic data, economic data, as well as data on labor participation and capital investment from various official sources such as the Bureau of Statistics of Japan and the Indonesian Central Statistical Authority. We collect data by conducting literature studies, analyzing documents, and gathering secondary data from various official reports and publications. We use comparative methods to analyze the data and compare the impact of childfree decisions in Japan and Indonesia. This analysis will cover three main aspects: labor participation, capital investment, and technological innovation.

4. Theoretical Framework

The theoretical framework for this study is grounded in Economic Growth Theory, which elucidates the interplay of key factors such as labor force participation, capital investment, and technological innovation in driving long-term economic growth. Pioneered by economists like Robert Solow and Paul Romer, this theory provides a robust basis for examining the impact of demographic changes resulting from childfree decisions on regional economies in Japan and Indonesia. Solow's (1956) exogenous growth model underscores the significance of capital accumulation and labor force expansion, with technological innovation considered an exogenous factor enhancing productivity (Solow, 1956). In contrast, Romer (1986) emphasizes the crucial role of government policies and institutional environments in fostering innovation and economic development (Romer, 1986).

This study posits that childfree decisions significantly influence three main components of economic growth: labor force participation, capital investment, and technological innovation.

In terms of labor force participation, low birth rates in Japan lead to a reduced number of young workers, potentially impeding economic productivity. Conversely, in Indonesia, childfree decisions may alleviate demographic pressures and enhance female labor force participation, thereby supporting economic growth.

Regarding capital investment, demographic shifts alter investment patterns in both countries. Japan faces increased investment in automation and robotics to counteract labor shortages. Meanwhile, Indonesia prioritizes investment in education and training for young workers to harness demographic potential and bolster long-term economic growth. Technological innovation plays a pivotal role in addressing demographic challenges. Japan's focus on technological advancements aims to boost productivity and mitigate labor shortages. In Indonesia, adopting suitable technologies can improve economic efficiency, productivity, and reduce poverty levels.

This framework offers a comprehensive lens to analyze how childfree decisions affect the quantity and quality of the labor force, capital investment patterns, and the role of technological innovation in enhancing economic productivity in both nations. By employing Economic Growth Theory, this study aims to provide detailed insights into the interconnections between demographic changes and economic growth. Furthermore, the research explores how tailored policies can address demographic challenges and promote sustainable economic development in Japan and Indonesia.

5. Result and Discussion

5.1. Demographic Trends in Japan and Indonesia

Japan is facing serious demographic challenges with significant implications for its economy and social structure. A key issue is the ongoing decline in birth rates. In 2022, Japan recorded its lowest number of births in modern history, with only 799,728 births, down from 811,604 births in 2021 (Ministry of Health, Labour and Welfare, n.d.). This declining trend is expected to continue into 2023 and 2024, indicating that Japan will face an increasingly aging population in the future. Additionally, population aging is a critical issue, with more than 28% of Japan's total population being 65 years or older in (Japan Statistics Bureau, 2024). The average life expectancy in Japan reached 84.5 years in 2022 (World Bank, 2023). This high life expectancy reflects a high quality of life but also adds pressure on the healthcare system and workforce. Studies indicate that population aging significantly impacts Japan's economic growth and workforce structure (Goh et al., 2020). This issue requires Japan to address major challenges in managing healthcare costs and meeting declining workforce needs (Naohiro & Retherford, 2006).

In contrast, Indonesia faces a younger and potentially more dynamic demographic profile. In 2022, approximately 50% of Indonesia's population was under 30 years old (Badan Pusat Statistik, 2024). This indicates a substantial demographic potential that could be leveraged for economic growth if managed well. Although birth rates in Indonesia have slightly decreased, with a fertility rate of 2.3 children per woman in 2022, down from 2.4 children per woman in 2021 (Rizka et al., 2021), Indonesia still has a relatively young population compared to other countries. Projections suggest that the working-age population will continue to grow until 2030, offering significant opportunities for Indonesia to harness this demographic dividend and drive sustainable economic growth (Juned, 2016). However, a key challenge for Indonesia is how to manage and utilize this potential to ensure that economic growth is both sustainable and inclusive (McDonald, 2014).

5.2. Impact of Childfree Decision in Japan

The decision for childfree Japan has had a significant impact on the labor market. A sharp decline in birth rates has resulted in a decrease in the number of young workers entering the labor market. Critical sectors such as health, manufacturing, and technology are feeling this

labor shortage (Nomura & Koizumi, 2016). To address this problem, many Japanese companies are investing in automation and robotics, which require huge investments in technology and training (Kato, 2022). This change not only affects the structure of the labor market, but also necessitates rapid adaptation to technological innovations that are often difficult for the older labor force.

The impact of childfree decisions is also visible in economic productivity. An aging workforce tends to be less productive and more in need of training and health care, which can hinder growth in sectors that depend on a young and dynamic workforce, such as technology and manufacturing (Jiang et al., 2023). This decline in productivity threatens Japan's competitiveness in the global market and requires strategies to address the shortage of productive and adaptive labor to the latest technology (Dai & Hatta, 2021).

In terms of consumption patterns, individuals who choose not to have children often have higher incomes because there is no expenditure on childcare. This results in higher consumption of luxury goods, travel, and personal services, thereby influencing the overall consumption pattern (Kitao & Yamada, 2024). However, these changes also result in a decrease in demand for child-related products and services, including education and nursing, potentially impacting industries that heavily depend on family consumerism (Wang, 2023).

Overall, the long-term impact of the childfree decision consists of structural changes in the labor market and consumption patterns in Japan. The decline in the number of young workers and shifts in consumption patterns necessitate adaptation policies that support demographic change, such as incentives for automation and training for the older workforce. Governments and companies need to consider strategies to address these impacts in order to maintain economic growth and social stability (Goh et al., 2020).

5.3. Impact of Childfree Decision in Indonesia

The decision for childfree has had a significant impact on various economic aspects in Indonesia, especially in terms of labor participation and demographic dividends. Indonesia, with a large young population, has great potential to leverage the demographic dividend through increased labor participation (Setiawan, 2019). With more women choosing to have no children, they can enter and remain in the labor force longer, which potentially boosts productivity and supports economic growth (Fiorentina & Prihantoro, 2024). Research shows that the childfree decision allows for more efficient allocation of human resources and can enhance the country's overall economic potential.

However, challenges in family financing and consumption patterns also accompany the childfree decision, despite its potential benefits. The large family size in Indonesia often results in high household spending on education, health, and nutrition (Anggaresa & Suryana, 2023). By reducing the size of the family, the childfree decision can help reduce these financial pressures, enable more efficient resource allocation, and increase savings and investment rates. However, high population density also contributes to high poverty and unemployment rates, which affect crime rates and other social problems (Dari & Asnidar, 2022).

Moreover, childfree decisions have an impact on productivity and human resource development. Refusing to have children may free up more financial resources for personal education and training, thereby boosting productivity and bolstering long-term economic growth (George, 2023). Investment in education and skills development is key to effectively leveraging demographic dividends and reducing dependence on an unskilled labor force (Jatmiko, 2019).

On the other hand, Indonesia's high population density affects various aspects, such as poverty, crime, and environmental damage. High density increases poverty and unemployment rates due to limited employment, which affects crime rates (Purnomo et al., 2023). In addition, these densities also contribute to environmental damage, such as air pollution and a lack of clean water, which affect the quality of life and public health (Zuhri, 2014). By reducing family size through childfree decisions, there is potential to reduce some

of these negative impacts, improve environmental quality, and improve resource management. (Ahmedali et al., 2014) .

5.4. A Comparative Analysis

The decision to remain childfree has emerged as a significant socio-economic trend, influencing various aspects of national economies. This trend is particularly notable in countries with distinct demographic challenges, such as Japan and Indonesia. Japan, characterized by an aging population and low birth rates, faces severe labor shortages, prompting a shift towards automation and technological innovation. In contrast, Indonesia, with its burgeoning young population, grapples with the need for job creation and skill development to harness its demographic dividend. This comparative analysis explores how the childfree decision impacts the labor market dynamics, capital investment strategies, and policy implications in these two countries, drawing insights from Solow's and Robert's economic growth theories.

Table 1. A Comparative Analysis of childfree's impact on the economy

| Aspect | Japan | Indonesia |
|--|---|--|
| Labor Market Dynamics | Labor shortages and an aging population. Reliance on automation and robotics to maintain productivity (Jentzsch, 2023). | Large and growing young population, requiring job creation and skill development (Kurniawan & Aruan, 2021). Childfree decisions increase female labor participation (Sulaiman et al., 2024). |
| Capital Investment and Role of Technology | Significant investment in automation and robotics aligns with the Solow growth model emphasizing the importance of capital accumulation and technology (Ni & Obashi, 2021). | Focus on human capital development, investment in education, and training. Childfree decisions allow for more financial resources to be allocated to education and skill development (Arifin, 2018). Consistent with Robert's growth theory emphasizing the role of human capital (Jatmiko, 2019). |
| Policy Implications | Support for technological innovation, incentives for older workforce participation, retraining, and skill development (Nguyen, 2020). | Policies should focus on education and job creation, encouraging balanced family planning, and supporting childfree decisions to manage demographic pressures (Jati, 2015). |
| Economic Growth Theory | Solow Model: Relying on technology and capital accumulation to address labor shortages (Solow, 1956). | Robert's Theory: Investment in human capital to enhance productivity and support long-term economic growth (Romer, 1986). |

Both Japan and Indonesia face unique labor market challenges influenced by their respective demographic trends. In Japan, low birth rates and an aging population have resulted in significant labor shortages, particularly in critical sectors such as healthcare, manufacturing, and technology. The decline in young workers has forced Japan to rely heavily on automation and robotics to maintain economic productivity (Jentzsch, 2023). The childfree decision in Japan exacerbates this situation, with fewer young people entering the labor market, deepening labor shortages and accelerating investment in technology.

In contrast, Indonesia faces different challenges. The country has a large and growing young population, necessitating adequate job creation and skill development. The main challenge for Indonesia is ensuring its young workforce has access to the necessary education and training to adapt to the evolving job market (Kurniawan & Aruan, 2021). The childfree decision in Indonesia can contribute to increased female labor participation, potentially enhancing productivity and economic growth (Sulaiman et al., 2024). With more women staying in the workforce, families can allocate resources more efficiently, potentially reducing economic pressure on households.

To address labor shortages, Japan has made significant investments in automation and robotics. This approach reflects the Solow economic growth model, which emphasizes the importance of capital accumulation and technology in boosting economic output (Ni & Obashi, 2021). With a declining workforce, Japan must rely on technology to maintain productivity and global competitiveness. The childfree decision in Japan accelerates this technology adoption, as companies seek ways to mitigate labor shortages by reducing dependence on human labor.

Conversely, Indonesia focuses on human capital development as its primary strategy to harness its potential. Investments in education and training aim to equip the young workforce with the skills needed to contribute effectively to the economy (Arifin, 2018). This approach aligns with Robert's growth theory, which emphasizes the crucial role of human capital in driving economic growth. The childfree decision in Indonesia allows for greater financial resource allocation to education and skill development, which in turn can enhance productivity and support long-term economic growth (Jatmiko, 2019).

These findings suggest different policy approaches for Japan and Indonesia. For Japan, policies should continue to support technological innovation and create incentives for older workforce participation. Measures such as retraining and skill development for older workers, as well as support for technology integration across various sectors, are essential (Nguyen, 2020). Additionally, policies supporting the childfree decision need to be balanced with strategies encouraging broader workforce participation, including incentives for older workers and improved worker welfare.

For Indonesia, policies should focus on education and job creation to harness the potential of its young population. The government needs to encourage balanced family planning and support childfree decisions to help manage demographic pressures and promote sustainable economic growth (Jati, 2015). Investments in education and skill training are crucial to ensure the young workforce is equipped to adapt to market changes and contribute to economic growth.

Solow's economic growth theory emphasizes the importance of capital accumulation, technological advancement, and labor in determining a country's economic output. In the context of Japan, the childfree decision and declining birth rates have led to a reduced workforce, thereby increasing reliance on technology and capital accumulation to maintain economic productivity. This demonstrates how labor shortages can be offset by investments in technology, consistent with Solow's model (Solow, 1956).

On the other hand, Robert's economic growth theory highlights the critical role of human capital in economic growth. In Indonesia, the childfree decision can enhance the quality of human capital by allowing greater resource allocation to education and skill development.

This investment will increase the productivity of the young workforce and support long-term economic growth, aligning with Robert's theory (Romer, 1986).

6. Conclusion

The decision to remain childfree has notable implications for economic and demographic dynamics, as illustrated by the comparative analysis of Japan and Indonesia. These two countries, with distinct demographic profiles, provide valuable insights into the broader impacts of childfree decisions.

In Japan, declining birth rates and an aging population have led to labor shortages and reduced productivity. Addressing these challenges requires family policy reforms, increased labor force participation, and significant investment in technological advancements. Automation and robotics are essential to maintaining productivity in line with Solow's economic growth model, which emphasizes capital and technological innovation.

In contrast, Indonesia's large, youthful population faces challenges related to poverty, unemployment, and environmental pressures. The childfree decision can alleviate financial burdens on families, allowing for more efficient resource allocation. Sustainable population management and the exploitation of demographic dividends are crucial for economic growth. Policies focused on education, skill development, and job creation are essential for leveraging Indonesia's demographic potential, aligning with Robert's growth theory on human capital development.

The findings indicate that childfree decisions significantly impact labor force participation, capital investment, and technological innovation. Japan must address labor shortages through technological advancements, while Indonesia needs to optimize its young demographic potential and manage economic resources effectively. This study provides valuable insights for policymakers and academics, emphasizing the need for tailored policies to address specific demographic and economic challenges. Future research should continue exploring the relationship between demographic decisions and economic growth to develop effective policies for sustainable development.

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