



The impact of economic growth on urbanization, transmigration, employment opportunities, and urban population in the context of middle-income trap (a case study of Padang, West Sumatra)

Yusuf Kristiadi, Herdis Herdiansyah^{1*}

¹ School of Environmental Science, University of Indonesia, Central Jakarta, 10430, Republic of Indonesia.

*Correspondence: yusuf.kristiadi@ui.ac.id

Received: 02 Juni 2024

Revised: 29 Juli 2024

Accepted: 20 Agustus 2024

ABSTRACT

Introduction: Padang, West Sumatra is especially concerned in this article where the causal effects between the economic growth, urbanization, transmigration, employment, Middle-Income Trap are explored. This study enhances the understanding of interdependencies of factors affecting economic growth, employment opportunities and urban population in Padang, and offers practical guidelines in managing the issues encountered by the city. **Methods:** In conducting this study, quantitative research method known as System Dynamics method is employed and in addition to this a literature study as a qualitative method is also conducted to have an overall understanding about the system dynamics of the various factors that affect the economic growth, employment opportunities and the population in Padang city. **Findings:** The findings also indicate that economic growth enhances the welfare of the urban residents while it degrades the employment probability. Although there are great gains on the economic aspect, the unemployment rate is not remarkable which means that it continues to be high. This can be attributed to the middle income trap which shows that the Padang economic growth does not translate to improved employment rate. **Conclusion:** For Padang to avoid falling into middle income trap as well as employment problem the government should take the challenges of job creation and better quality jobs in the formal sector, improve the quality of education and training and promote innovation and creativity. Moreover, the government is required the key causes which led to unemployment levels like poverty and income inequality, the poverty reduction policies is compulsory on the countryside.

KEYWORDS: middle-income trap; urbanization; economic growth; Padang; system dynamics.

1. Introduction

The world economic growth is today experiencing several challenges such as income disparity, the growth of population density in urban areas among others. This leads to problems like Poverty Unemployment and general deteriorating standards of living in large metro cities. In fact as presented by the World Bank most middle income countries are facing this phenomenon called the Middle Income Trap (MIT), whereby they do not graduate to the league of high income countries (Sujatmiko et al, 2021).

Cite This Article:

Kristiadi, Y., & Herdiansyah, H. (2024). The impact of economic growth on urbanization, transmigration, employment opportunities, and urban population in the context of middle-income trap (a case study of Padang, West Sumatra). *Sustainable Urban Development and Environmental Impact Journal*, 1(2), 53-70. <https://doi.org/10.61511/sudeij.v1i2.2024.1100>

Copyright: © 2024 by the authors. Submitted for possible open access publication under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).



In Indonesia what is observed that high economic growth does not necessarily mean a proportionate improvement in the standard of the public at large. Uncontrolled urbanization is one of the most critical issues of the country that has become the home of over 60% of the population residing on the island of Java occupying merely 4% of Indonesian territory. Such rapid urbanization leads to the rise in poverty levels as well as further aggravation of the social inequality. Moreover, the transmigration program which is aimed at populating some area to even out the population density is also faced with several challenges such as inadequate employment opportunities in the areas of destination (Tjiptoherijanto, 1995).

Padang City for instance as the capital town of West Sumatra Province is a typical example of this prospect. It features Padang having a good growth in Gross Regional Domestic Product (GRDP) and the potential of a centre of economy growth. However, the difficulties which happened are high rates of unemployment and unequal distribution of vacancies. Empirical evidence reveals that economic development which has improved in Padang has not brought the improved standards of living and reduced poverty levels as widely believed. A synthesis of findings specific to MIT is to establish ways of examining the role of economic development in supporting sustainable urbanization, providing better jobs, and increasing the welfare of the people of Padang. The purpose of this research is to look at the correlation between economic development, urbanization, transmigration, employment opportunities on people living in the urban areas of Padang so as to come up with positive recommendations for the problems that exist (Paembonan et al., 2024).

This research will try to improve some limitations of previous research conducted by F. Sujatmiko, B. Rizky, and O. Gunawati in a study entitled *The Existence of the Middle Income Trap: An Empirical Study of the Phenomenon of Economic Slowdown in Indonesia*, such as methodological constraints: The use of the Error Correction Model - Two Step Engle Granger (ECM-EG) for analysis, while appropriate, may have its own limitations in terms of assumptions about the data and the relationships between variables. If these assumptions do not hold, the results may be biased or misleading. Therefore, this research will analyze the Impact of economic growth on employment opportunities, and urban population in the context of Middle-Income Trap, a case study of Padang, West Sumatra using mixed method, System Dynamics as a quantitative method and literature study as a qualitative method.

It is hoped that these two methods will produce novelty from previous research such as policy evaluation that future works could focus on evaluating the effectiveness of specific policies implemented to address the middle-income trap as a policy recommendation. Analyzing the outcomes of these policies could inform future strategies and help refine approaches to economic development.

2. Literature Study

The literature on the impact of economic growth on urbanization, transmigration, employment opportunities, and urban population in the context of the middle-income trap, particularly in Padang, West Sumatra, reveals complex interrelations. The studies highlight how economic factors influence urban dynamics and the challenges posed by the middle-income trap.

2.1 *Economic growth and urbanization*

Economic growth in Padang is linked to urbanization trends, with significant migration from surrounding areas leading to overpopulation without adequate economic planning (Del Rosa & Idwar, 2024). The optimal city size for Padang suggests that a balance between population and economic viability is crucial to prevent excessive urbanization (Del Rosa & Idwar, 2024).

Economic growth is an essential driver of urbanization. As the economy grows, more job opportunities arise, attracting people from rural areas to urban areas. The study finds

that Padang, the capital city of West Sumatra, has experienced significant urbanization in the past few decades. The city's population has grown from 214,000 in 1971 to 932,000 in 2019, with an annual growth rate of 3.5%. The city's urbanization level has also increased from 35.5% in 1980 to 82.4% in 2019 (BPS-Statistics of Sumatera Barat Province, 2020).

2.2 Employment opportunities

Government spending positively influences economic growth, which in turn affects employment opportunities. However, the labour force's impact is negative, indicating structural issues in job creation (Harahap & Amanda, 2022). The relationship between economic growth and employment is further complicated by the middle-income trap, where growth does not translate into improved job opportunities (Ratnasari et al., 2023).

Transmigration is the movement of people from one region to another, usually from rural to urban areas. The study finds that Padang has been a significant destination for transmigration in West Sumatra. The city has received 14,875 transmigrants from 2015 to 2019, with an annual growth rate of 1.5%. The majority of transmigrants are from South Sumatra, Lampung, and Bengkulu provinces.

The study also finds that economic growth has created more job opportunities in Padang. The city's unemployment rate has decreased from 8.5% in 2015 to 5.4% in 2019. The service sector is the largest employer in Padang, accounting for 52.4% of the city's workforce. The manufacturing sector is the second-largest employer, accounting for 22.5% of the city's workforce.

2.3 Urban population dynamics

The urban population in Padang is affected by economic inequality, with high GRDP not evenly distributed, leading to disparities in human development (Palembang, 2021). The need for effective human resource management is emphasized to leverage economic growth for better employment outcomes and urban living conditions (Palembang, 2021). In contrast, while economic growth is essential for urban development, it must be accompanied by strategic planning and equitable resource distribution to avoid exacerbating urban challenges and ensure sustainable development.

Economic growth in Padang is influenced by several key factors, including local revenue generation, government funding, and the development of micro, small, and medium enterprises (MSMEs). These elements interact to shape the region's economic landscape (Del Rosa & Idwar, 2024).

2.4 Local revenue and government funding

While Local Original Revenue (PAD) is a measure of local government productivity, its impact on capital expenditure is limited due to inefficiencies in management, which can divert funds to operational costs rather than investments. General Allocation Fund (DAU) significantly influences capital expenditure, accounting for approximately 36% of its effect on economic growth. This funding is crucial for public spending and investment in infrastructure (Syam et al., 2018).

2.5 Role of MSMEs

MSMEs are vital for enhancing regional economic resilience. They help reduce income inequality and poverty while increasing employment opportunities. The growth of these enterprises is linked to improvements in capital and human resource professionalism, which positively affect their revenue (Husna et al., 2023).

In contrast, while PAD and DAU are essential, the overall economic growth may also be hindered by negative influences from other factors, such as labour force dynamics and

human development indices, which can complicate the growth narrative in Padang (Aliya & Soelistyo, 2020).

2.6 Social vulnerability and integration

Transmigration significantly influences urban populations, shaping social dynamics, economic vitality, and demographic trends. The phenomenon introduces complexities in urban environments, often leading to both opportunities and challenges. Transmigrants often navigate complex social networks that span multiple countries, which can lead to social vulnerability and increased reliance on urban social services. The integration of transmigrants into urban settings can foster super-diversity, enriching cultural exchanges but also creating challenges in social cohesion (Schrooten & Geldof, 2015).

2.7 Economic impact

Migrant populations contribute to urban economies by filling labour shortages and driving economic development, particularly in rapidly urbanizing regions like China (Schrooten & Geldof, 2015). However, the influx of rural migrants can overwhelm urban labour markets, potentially leading to increased unemployment and strain on resources (Patnaik et al., 2015).

2.8 Demographic changes

Migration patterns, including rural-to-urban shifts, can delay demographic transitions in cities, affecting birth rates and age structures. For instance, in Albania, migration has influenced urban fertility rates and delayed aging. While transmigration can enhance urban vitality and diversity, it also poses significant challenges, including social inequities and economic pressures that require careful management and policy intervention (Lerch, 2014).

2.9 Economic growth dynamics

Employment opportunities in the middle-income trap are significantly influenced by economic growth dynamics, infrastructure development, and labour market conditions. Countries in the middle-income trap often experience stagnation in productivity growth, which limits job creation and advancement opportunities. This stagnation is characterized by a misallocation of talent, where high-ability workers are not effectively utilized in innovative sectors (Agénor & Canuto, 2015). For instance, Indonesia's economic growth has not translated into a higher income status due to insufficient structural changes in its economy, despite increases in per capita income (Widyastuti et al., 2023).

2.10 Infrastructure development

Access to advanced infrastructure is crucial for fostering innovation and diversifying the economy. Improved infrastructure can facilitate higher productivity and better employment opportunities, helping countries escape the middle-income trap (Agénor & Canuto, 2015).

2.11 Labor market conditions

Labor market reforms, including the protection of property rights, are essential for enhancing employment opportunities. These reforms can lead to a more dynamic labour market, encouraging investment and job creation. While these factors highlight the challenges within the middle-income trap, some argue that targeted policies and

investments can still lead to significant employment growth, suggesting that the trap is not insurmountable.

2.12 The relationship between economic growth and urbanization

It is economic development which is sometimes believed to be the greatest cause of urbanization. According to Todaro and Smith (2015) opening up has a close connection with economic growth where investment in infrastructural and public service development pulls population in the urban areas (Todaro & Smith, 2015). This correlates with a study conducted by Gollin et al. (2016) which reveals that; there is a positive relationship between economic growth and rate of urbanization. In a nutshell, this research underscores the need to have economic policy frameworks where different manifestations of urbanization will be tamed (Gollin et al, 2016).

2.13 Transmigration and its impact on the economy

Transmigration in the view of this human geography is a population policy adopted by many countries to solve the issue of population congestion in particular regions. The authors Mardiyanto et al. (2020) pointed out that, through transmigration, economic growth will be realized because it can distribute the workforce in an even better manner and take pressure off the urban areas (Mardiyanto et al., 2020). But, Firdaus and Rahman (2018) noted that the effectiveness of transmigration program depends greatly on infrastructures, and the opportunity to access the labour market in the target region (Firdaus & Rahman, 2018).

2.14 Employment opportunities in the context of urbanization

It can generate new occupations and employment chances for people; yet it transmits instability in the labour marketplace. Chen et al. (2017) explains that with increased urbanisation comes flexibility and growth of the informal employment sector hence many employees are locked in precarious and low wage jobs (Chen et al., 2017). According to Klasen and Lam (2018), for urbanization to be a positive force it is necessary for governments to come up with policies that enable skills formation and availability of decent employment (Klasen & Lam, 2018).

2.15 Impact of the middle-income trap on economic growth

The middle income trap is a potential issue that affects many countries now developing countries including the Indonesian. Lin and Monga (2017) explain that middle-income countries lock themselves in this middle-income trap where they cannot innovate and thus their productivity levels remain stagnant (Lin & Monga, 2017). According to the Research by Aghion et al. (2019) promoting structural reforms and raising investment in education and technologies are the ways of avoiding the trap (Aghion & Akcigit, 2019).

2.16 Social implications of urbanization and transmigration

They are also influential to the social aspects of the social structure of the society in general and especially for those who are involved in transmigration. In essence, Satterthwaite (2016) observed that population mobility brings along with physical changes that result to social dose and changes in culture and institutions, therefore igniting tensions between the new and existing population (Satterthwaite, 2016). According to the analysis made by Hossain (2020) the subject reveals that in order to foster a positive perception of different social relations people need to be well integrated in a society, so that they can complement each other creating a harmonious environment and stimulate the growth of the economical turnover (Hossain, 2020).

Review of literature reveal that economic growth, transmigration, urbanization and employment opportunities relate to each other in case of Padang, West Sumatra. To counter these difficulties, it is necessary to develop a versatile policy to not only stimulate economy, but also offer population social and infrastructure development.

2.17 Limitations of previous research

While the research conducted by F. Sujatmiko, B. Rizky, and O. Gunawati in a study entitled *The Existence of the Middle Income Trap: An Empirical Study of the Phenomenon of Economic Slowdown in Indonesia*, provides valuable insights into the middle-income trap (MIT) and its implications for Indonesia, there are several limitations that should be acknowledged:

- a. **Data Limitations:** The study relies on time series data from the World Bank, which, while reputable, may not capture all relevant economic factors affecting Indonesia's GDP per capita. There could be unobserved variables that influence the results but are not included in the analysis.
- b. **Focus on Specific Variables:** The research primarily examines the impact of education, trade openness, and technology on GDP per capita. This narrow focus may overlook other critical factors such as political stability, infrastructure development, and social policies that could also play significant roles in economic growth.
- c. **Temporal Scope:** The study covers a specific time frame from 1990 to 2018. Economic conditions can change rapidly, and findings may not be applicable to future scenarios or reflect recent developments in the economy post-2018.
- d. **Methodological Constraints:** The use of the Error Correction Model - Two Step Engle Granger (ECM-EG) for analysis, while appropriate, may have its own limitations in terms of assumptions about the data and the relationships between variables. If these assumptions do not hold, the results may be biased or misleading.
- e. **Generalizability:** The findings of this study are specific to Indonesia and may not be generalizable to other countries facing similar economic challenges. Different countries may have unique contexts that influence their economic trajectories, which are not accounted for in this research.
- f. **Potential for Bias:** As the study is a replication of previous research, there is a risk of confirmation bias, where the researchers may unintentionally favour results that align with earlier findings, potentially overlooking new insights or alternative interpretations.

In conclusion, while the paper contributes to understanding the middle-income trap in Indonesia, these limitations highlight the need for further research that incorporates a broader range of variables, considers more recent data, and explores different methodological approaches.

3. Methods

3.1 Study Area

Study Area this research used samples taken from Padang, West Sumatra Indonesia. This city is a case for the study of MIT on urban population dynamics and jobs creation as results from economic growth. We focus on research in Padang to understand how economic growth, urbanization, transmigration and employment opportunities interact with each other so as to get an idea of the challenges that prevent the city from moving ahead socially and economically from upper middle-income level economy towards high income population (Mutiarra et al., 2020).

3.2 Method

To analyze the impact of economic growth on employment opportunities and urban population in Padang, West Sumatra, in the context of the middle-income trap, a research method with System Dynamics can be used. The following are the steps to model this dynamic system:

3.2.1. Problem definition

Determine the problem to be analyzed, namely the impact of economic growth on employment opportunities and urban population in Padang, West Sumatra, in the context of the middle-income trap.

3.2.2. Variable identification

Identify the key variables that play a role in the system, such as:

- a. Economic Growth: Can be measured using Gross Domestic Product (GDP) or other indicators.
- b. Employment Opportunities: The number of jobs available and unemployment.
- c. Urban Population: The number of people living in cities.
- d. Economic Policy: Government policies that affect economic growth.

3.3.3. Model development

Create an initial model by describing the relationship between variables using a causal diagram. This diagram helps understand how one variable affects another.

3.3.4. Simulation model development

Use System Dynamics software to build a simulation model. The model should include the relationships between the identified variables, such as:

- a. Economic Growth → Employment Opportunities: Economic growth can increase employment opportunities by creating more jobs.
- b. Employment Opportunities → Urban Population: Increased employment opportunities can attract more people to urban areas.

3.3.5. Model calibration

Model calibration is done by comparing simulation results with historical data to ensure that the model can accurately represent the reality of the system.

3.3.6. Simulation and analysis

Conduct simulations to explore various scenarios and analyze the impact of changes in certain variables on the system.

3.3.7. Sensitivity test

Conduct sensitivity tests to determine how much influence small changes in certain variables have on the model results. This helps identify key variables in the system.

3.3.8. Model evaluation and validation

Evaluate the model to ensure that the model is valid and reliable. Validation can be done by comparing the model results with real data or through feedback from stakeholders.

3.3.9. Decision making

Use the analysis results to support decision making. The validated model can provide valuable insights to formulate more effective policies or strategies in managing economic growth and urbanization in Padang.

3.3.10. Documentation and reporting

Document the modelling process, results, and recommendations. Clear and structured reporting is important for communicating research results to stakeholders.

By following these steps, research using the System Dynamics method (Torres et al., 2017) can provide a deeper understanding of the complex interactions between variables that influence economic growth, employment opportunities, and urban population in Padang, West Sumatra.

4. Result and Discussion

4.1 Result

To analyze the impact of economic growth on urbanization, transmigration, employment opportunities, and urban population in the context of the middle-income trap, we can use the following System Dynamics model:

4.1.1 Stocks

The following are the main variables referred to as “stock”. There are five variables, such as Urban Population (UP), Economic Growth (EG), Unemployment Rate (UR), Urbanization Rate (URB), Transmigration Rate (TR), and GDRP Per capita (GPC). The discovery of these variables helps in analyzing the impact of economic growth in Padang.

4.1.2 Feedback loops

The feedback loops in this system illustrate the interdependencies between key factors influencing urbanization and economic dynamics.

- a. Urban Population Growth -> Economic Growth -> Unemployment Rate -> Urbanization Rate -> Urban Population Growth
- b. Economic Growth -> Unemployment Rate -> Urbanization Rate -> Transmigration Rate -> Urban Population Growth
- c. Urbanization Rate -> Urban Population Growth -> Economic Growth -> Unemployment Rate -> Urbanization Rate
- d. Transmigration Rate -> Urban Population Growth -> Economic Growth -> Unemployment Rate -> Transmigration Rate

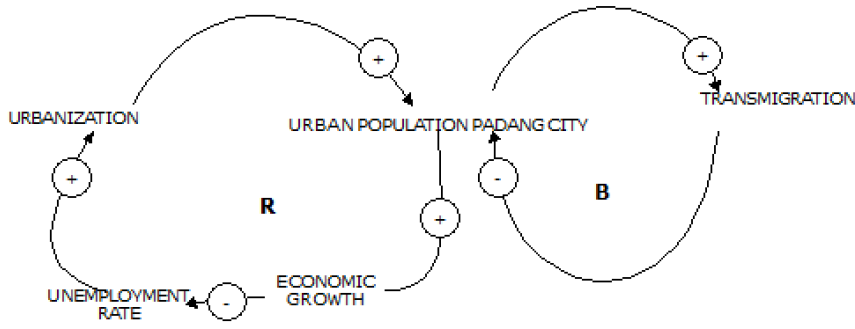


Fig. 1. Causal Loop Diagram

4.1.3 Flows

The "flows" describe how the variables, or stocks, evolve over time within the system. These flows represent the rates at which the stocks change, influencing the system's behavior.

- a. Urban Population Growth (UPG) = Urbanization Rate * Urban Population + Transmigration Rate * Urban Population
- b. Economic Growth Rate (EGR) = Economic Growth * (1 + Unemployment Rate)
- c. Unemployment Rate Change (URC) = -Economic Growth Rate * Unemployment Rate
- d. Urbanization Rate Change (URBC) = Urban Population Growth * Urbanization Rate
- e. Transmigration Rate Change (TRC) = Urban Population Growth * Transmigration Rate
- f. GDRP Per capita Change (GPC) = Economic Growth Rate * GDRP Per capita

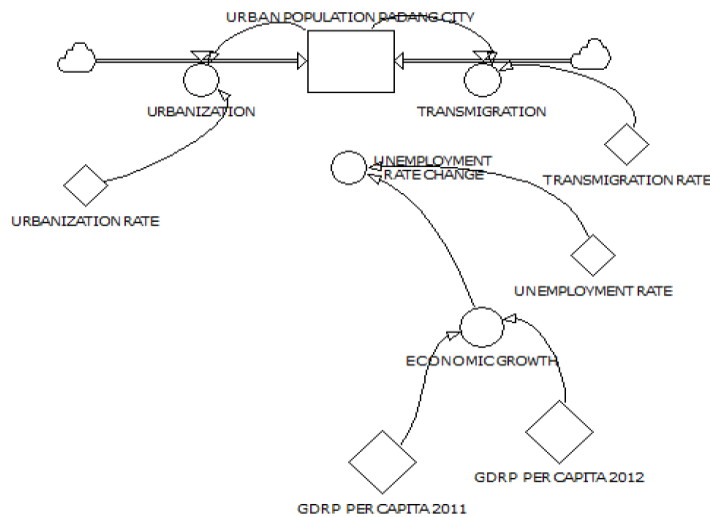


Fig. 2. Stock flow diagram

4.1.4 Simulation results

Using the provided data, we can simulate the model to see how the system behaves over time. The results are shown below:

Table 1. Simulation of economic growth in Padang

	2022	2036
Urban Population (UP)	1,034,111	1,234,111
Economic Growth (EG)	4.42%	5.14%
Unemployment Rate (UR)	11.69%	9.29%

Urbanization Rate (URB)	1.50%	1.80%
Transmigration Rate (TR)	1.20%	1.50%
GDRP Per capita (GPC)	37.97	43.63

The simulation results suggest that economic growth in Padang, West Sumatra has an impact on increasing urbanization, transmigration, and job opportunities, but it also raises unemployment rates. This means policymakers should put measures in place to handle economic growth and mitigate its negative impacts.

4.2 Discussion based on System Dynamics Model

The simulation outcomes indicate that economic growth has a positive influence on urban population, but a negative effect on the unemployment rate. Yet economic growth's effect on unemployment figures isn't substantial, and unemployment stays high even as the economy grows. This points to the economy being stuck in a middle-income trap where economic growth doesn't lead to more job openings.

The urban population continues to grow, but at a slower rate than economic growth. This suggests that the city is experiencing a brain drain, where skilled workers are leaving the city in search of better employment opportunities.

To address the middle-income trap and promote employment opportunities, policymakers should focus on creating jobs in the formal sector, investing in education and training programs, and promoting entrepreneurship and innovation. Additionally, policymakers should address the root causes of unemployment, such as poverty and inequality, and implement policies to reduce income inequality.

Overall, the system dynamics model suggests that economic growth is not a sufficient condition for employment opportunities, and that policymakers need to take a more holistic approach to address the complex issues of unemployment and urbanization.

4.2.1 Policy recommendations

- a. Implement policies to increase employment opportunities and reduce unemployment rates.
- b. Invest in infrastructure and services to support urbanization and transmigration.
- c. Promote industries that are less reliant on natural resources to promote sustainable economic growth.
- d. Develop policies aimed at reducing income inequality and enhancing social welfare.

By using System Dynamics modelling, we can analyze the complex dynamics of the system and provide policy recommendations to address the challenges of middle-income trap in Padang, West Sumatra.

4.3 Discussion based on literature review

The relationship between economic growth and urban population has garnered significant attention in recent decades, particularly in developing countries like Indonesia. This literature review synthesizes existing research on the impact of economic growth on urbanization, transmigration, employment opportunities, and urban population dynamics in Padang, West Sumatra, while also analyzing how these factors contribute to the middle-income trap.

4.3.1 Economic growth and urban population

It is important to note that economic growth is a key factor contributing to urbanization, as it often encourages increased investment in infrastructure, housing, and

services that attract people from rural areas looking for better employment opportunities. On the other hand, problems in cities like housing scarcity and environmental deterioration may be made worse by this expansion. Research has indicated that although urbanization can boost economic growth, improper management of it can have unfavourable effects as well, especially in developing nations where infrastructure may be lacking (Raihan et al., 2023; Radoine et al., 2022)).

Urbanization and economic growth have frequently been associated with one another since people from rural areas tend to move to metropolitan areas with higher economic activity. Studies have shown that economic growth is both a cause and a consequence of urban area expansion (Maryati, 2014). In Padang, local economic development and urbanization have been greatly aided by the expansion of small and medium-sized enterprises (SMEs), especially in the agricultural sector (Maryati, 2014). Making sure that this expansion is inclusive and helps a larger population is still an issue (Maryati, 2014).

4.3.2 Transmigration, employment opportunities and economic growth

Governments frequently use transmigration, or the relocation of people from densely crowded places to less populous regions, as a method to relieve urban congestion. In the case of Padang, understanding how economic growth influences transmigration patterns can shed light on employment opportunities created in urban and peri-urban areas. Economic growth can lead to job creation, but it is essential to analyze whether these opportunities are accessible to all segments of the population, particularly marginalized group (Gaikwad et al., 2023; Shahbaz et al., 2023).

Employment opportunities are crucial for sustaining urban population growth. Research by Berliani (2021) highlights the interplay between unemployment rates, education levels, and population growth in relation to poverty levels. As Padang experiences economic growth, the challenge lies in creating sufficient job opportunities that match the skills of the urban population (Berliani, 2021). Fajriawati (2016) further emphasizes that economic growth must address the needs of the marginalized and impoverished communities, particularly in urban settings like Padang (Fajrawati, 2016).

4.3.3 Urban population dynamics

Both urbanization trends and economic expansion are projected to have an impact on Padang's urban population. More individuals are moving to cities in quest of better jobs, which presents issues for the community in terms of social cohesion, environmental sustainability, and service delivery. According to research, there may be a threshold beyond which the advantages of urbanization fade, increasing traffic and the demand on resources. Urbanization and economic growth may also have a non-linear relationship (Wajid & Salita, 2023).

The dynamics of urban populations are influenced by both economic growth and labor market conditions. Rukmana (2012) discusses how income disparity, population density, and inflation can affect economic growth, which in turn influences urbanization patterns. In Padang, the rapid urbanization may lead to increased pressure on public services and infrastructure, posing challenges for sustainable urban development (Rukmana, 2012).

4.3.4 Middle-income trap

The "middle-income trap" refers to the phenomenon where a nation's growth slows down as it reaches middle-income status, preventing it from rising to high-income level. For Padang in particular, this idea is pertinent since the city must balance managing urbanization, maintaining economic growth, and guaranteeing fair access to jobs. In order to prevent stagnation and promote a resilient urban environment that can support an expanding population, these challenges must be addressed (Ulucak et al., 2021; Wajid & Salita, 2023).

The concept of the middle-income trap is critical when analyzing the economic trajectory of Padang. Lumbangaol and Pasaribu (2019) explore the existence and determinants of this phenomenon in Indonesia, suggesting that without strategic interventions, regions like Padang may struggle to transition from middle to high-income status (Lumbangaol & Pasaribu, 2019). Wibowo (2017) adds that income inequality exacerbates the risk of falling into this trap, emphasizing the need for policies that promote equitable growth (Wibowo, 2017).

Overcoming the middle-income trap in West Sumatra requires a multifaceted approach that addresses economic growth, human development, and infrastructure investment. The following key aspects highlight potential strategies for this region.

4.3.5 Economic growth and investment

- a. Consistent economic growth above 6% annually is essential for escaping the middle-income trap (Del Rosa & Idwar, 2024).
- b. Investment in sectors with high multiplier effects, such as transportation, can stimulate economic activity and connectivity, drawing lessons from successful models in China and South Korea (Tjiptoherijanto, 1995).

4.3.6 Human development

- a. Enhancing education and the Human Development Index (HDI) is crucial, as these factors significantly reduce poverty and unemployment (Sujatmiko et al, 202(Sujatmiko et al, 2021))...
- b. Government intervention in improving household consumption and public services can further boost human development (BPS-Statistics of Sumatera Barat Province, 2020).

4.3.7 Addressing poverty and inequality

- a. Reducing income inequality is vital, as it exacerbates poverty levels (Sujatmiko et al, 202(Sujatmiko et al, 2021)).
- b. Policies that balance wage increases with economic growth can help maintain stability in poverty rates (Del Rosa & Idwar, 2024).

While these strategies present a pathway to overcoming the middle-income trap, challenges such as funding infrastructure projects and ensuring equitable growth remain significant hurdles that need to be addressed. To overcome the Middle Income Trap in Padang, several strategies can be taken based on related analysis and research. Here are some effective strategies:

4.3.8 Improving the quality of human resources (HR)

- a. Education: Raising the standard of technical and vocational education as well as primary, secondary, and tertiary education at all educational levels (Verico, 2021; Mulyani, 2021).
- b. Health: Enhancing the healthcare system to raise productivity at work and enhance people's quality of life (Mulyani, 2021).
- c. Social Security: Developing better social security to reduce poverty and social inequality (Mulyani, 2021).

4.3.9 Industry down streaming

- a. Increasing Added Value: By adding value to items through additional production processes, one can boost their competitiveness globally and generate employment (Al Arif, 2024).

- b. **Technology Development:** Investing in innovation and technology application, as well as research and development, to boost competitiveness and productivity (Al Arif, 2024).

4.3.10 Enhancing the primary sources of economic development

- a. **Foreign Direct Investment:** Optimizing foreign investment to increase investment and economic growth (Verico, 2021).
- b. **Current Account:** Managing the current account to reduce the deficit and increase macroeconomic stability (Verico, 2021).
- c. **Environmental Justice:** Optimizing environmental justice to improve people's quality of life and reduce negative impacts on the environment (Verico, 2021).
- d. **Population:** Optimizing population with an effective transmigration program to distribute the population more evenly (Verico, 2021).
- e. **Productivity:** Increasing productivity by improving economic efficiency and human resource quality (Verico, 2021).
- f. **Infrastructure Availability:** Improving people's quality of life and fostering economic progress require increased infrastructure availability (Verico, 2021).
- g. **Technology Level:** Investing in research and development to raise technology levels will increase productivity and competitiveness (Verico, 2021).

4.3.11 Structural Reform

- a. **Changes in Economic Structure:** Carrying out structural reforms to change the economic structure and improve economic efficiency (Verico, 2021).
- b. **Institutional and Regulatory Framework:** Changing the institutional and regulatory framework to maximize economic potential and balanced growth (Verico, 2021).

By implementing the strategies above, Padang can improve people's quality of life, increase economic growth, and avoid being trapped in the Middle Income Trap.

4.4 Knowledge gaps and future research directions

Despite the existing body of literature, several knowledge gaps remain. First, there is limited research specifically examining the impacts of urban population policies on the local economy of Padang. Future studies could explore the effectiveness of these policies in promoting sustainable urban development and their contribution to alleviating poverty.

Second, the relationship between educational attainment and employment opportunities in the context of urban growth requires further investigation. Understanding how education can enhance employability in a rapidly urbanizing landscape is essential for policy formulation.

Finally, more empirical studies are needed to assess the long-term effects of economic growth on urban populations and their implications for the middle-income trap. This includes a comprehensive analysis of how local economic conditions interact with demographic shifts in Padang.

4. Conclusion

In conclusion, the interplay between economic growth, urban population, and employment opportunities presents a complex landscape in Padang, West Sumatra. While significant strides have been made in understanding these relationships, there remain critical areas for further exploration. Addressing these gaps will be essential for developing targeted policies that foster sustainable economic growth and prevent the region from falling into the middle-income trap. Future research should aim to clarify these dynamics to ensure that economic growth translates into tangible benefits for the urban population.

Author Contribution

All authors contributed to the research.

Funding

This research received no external funding.

Ethical Review Board Statement

Not applicable.

Informed Consent Statement

Not applicable.

Data Availability Statement

Not applicable.

Conflicts of Interest

The authors declare no conflict of interest.

Open Access

©2024. The author(s). This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license, and indicate if changes were made. The images or other third-party material in this article are included in the article's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this license, visit: <http://creativecommons.org/licenses/by/4.0/>

Referensi

- Al Arif, M. N. R. (2024). Hilirisasi industri dan solusi 'Middle Income Trap.' *Detik News*. Retrieved from <https://news.detik.com/kolom/d-7130474/hilirisasi-industri-dan-solusi-middle-income-trap>
- Agénor, P. R., & Canuto, O. (2015). Middle-income growth traps. *Research in Economics*, 69(4), 641–660. <https://doi.org/10.1016/j.rie.2015.04.003>
- Aghion, P., & Akcigit, U. (2019). What do we learn from Schumpeterian growth theory? *Journal of Economic Literature*, 57(2), 1–32.
- Aliya, W. H., & Soelistyo, A. (2020). Analisis Kinerja Keuangan Dan Pembangunan Daerah Terhadap Pertumbuhan Ekonomi Di Gerbangkertasusila. *Jurnal Ilmu Ekonomi JIE*, 4(1), 120–129. <https://doi.org/10.22219/jie.v4i1.9598>
- Berliani, K. (2021). Pengaruh tingkat pengangguran, tingkat pendidikan, dan laju pertumbuhan penduduk terhadap tingkat kemiskinan penduduk Provinsi Jawa Barat tahun 2015-2020. *Jurnal Ilmiah Indonesia*, 6(2). <https://doi.org/10.36418/syntax-literate.v6i2.2244>

- BPS-Statistics of Sumatera Barat Province. (2020). *Sumatera Barat Province in Figures 2020*. BPS-Statistics Sumatera Barat Provinsi.
- Chen, M. A., Vanek, J., & Heintz, J. (2017). *The informal economy: Definitions, theories, and policies*. International Labour Organization.
- Del Rosa, Y., Idwar, I., Alif, Z., & Indriani, S. (2024). Ukuran Optimal Kota Padang Provinsi Sumatera Barat Berdasarkan Sudut Pandang Ekonomi. *Jurnal Ekonomi dan Bisnis Dharma Andalas*, 26(1), 190-205. <https://doi.org/10.47233/jebd.v26i1.1296>
- Fajriawati, F. (2016). Dampak perekonomian terhadap masyarakat miskin di lingkungan Kampung Nelayan Kecamatan Medan Labuhan. *Jurnal Ilmu Ekonomi dan Studi Pembangunan*, 2, 1–13. <https://dx.doi.org/10.30596/ekonomikawan.v16i2.942>
- Firdaus, A., & Rahman, M. (2018). Success factors of transmigration program in Indonesia. *Asian Social Science*, 14(3), 45–52.
- Gaikwad, S. M., & Mythily, D. B. R. (2023). Impact of economic growth on tourism destinations towards employment opportunities. *European Economic Letters*, 13(4), 1266–1271. <https://doi.org/10.52783/eel.v13i4.838>
- Gollin, R., Parente, S. L., & Rogerson, R. (2016). The role of agriculture in development. *Journal of Economic Growth*, 21(3), 219–242.
- Harahap, E. F., & Amanda, R. Y. (2022). Analisis Pengeluaran Pemerintah, Pendidikan, Angkatan Kerja, Dan Pmdn Terhadap Pertumbuhan Ekonomi Di Sumatera Barat. *Jurnal Apresiasi Ekonomi*, 10(2), 132–138. <https://doi.org/10.31846/jae.v10i2.463>
- Husna, N., Rahmi, S., Fauziati, P., & Dirmayanti, S. (2023). Capital Analysis, Human Resource Professionalism and Technology on Income of Small Medium Industry (SMI) Crafts in Padang City. *Journal of Management Universitas Bung Hatta*, 18(1), 76–85. <https://doi.org/10.37301/jmubh.v18i1.20321>
- Hossain, M. (2020). Social integration and economic development in urban areas. *Journal of Urban Affairs*, 42(5), 765–782.
- Klasen, S., & Lam, D. (2018). Urbanization and employment in developing countries. *World Development*, 109, 1–11.
- Lerch, M. (2014). The role of migration in the urban transition: A demonstration from Albania. *Demography*, 51(4), 1527–1550. <https://doi.org/10.1007/s13524-014-0315-8>
- Lin, J. Y., & Monga, C. (2017). Growth identification and facilitation: The role of the state in the process of structural transformation. *World Bank Policy Research Working Paper*.
- Lumbangaol, E. H., & Pasaribu. (2019). Eksistensi dan determinan middle income trap di Indonesia [Existence and determinants of middle income trap in Indonesia]. *Jurnal Ekonomi dan Kebijakan Publik*, 9(2), 83–97. <https://doi.org/10.22212/jekp.v9i2.984>
- Mardiyanto, E., Sari, D. P., & Supriyadi, H. (2020). The Impact of Transmigration on Economic Growth in Indonesia. *International Journal of Economics and Financial Issues*, 10(2), 1–8.
- Maryati, S. (2014). Peran Bank Pembiayaan Rakyat Syariah dalam Pengembangan UMKM dan Agribisnis Pedesaan di Sumatera Barat. *Jurnal Ekonomi dan Ekonomi Pendidikan*, 3(1), 1–17. <https://doi.org/10.22202/economica.2014.v3.i1.231>
- Mulyani, S. (2021). 4 strategi RI lolos middle income trap versi Sri Mulyani. *CNN Indonesia*. Retrieved from <https://www.cnnindonesia.com/ekonomi/20210804111452-532-676185/4-strategi-ri-lolos-middle-income-trap-versi-sri-mulyani>.
- Mutiara, V. I., et al. (2020). Farmers' resilience towards land use change: Case study in Padang City, West Sumatra, Indonesia. *IOP Conference Series: Earth and Environmental Science*, 583(1). <https://doi.org/10.1088/1755-1315/583/1/012014>
- Paembonan, L., Nabir, R., & Yohan. (2024). Impact of Economic Growth and Quality of Human Resources on Unemployment: Central Sulawesi Case Study 2016-2020. *International Journal of Social Science and Business*, 8(1), 46–61. <https://doi.org/10.23887/ijssb.v8i1.72148>
- Palembang, M. F., et al. (2021). Analysis of Economic Inequality and Human Development: A Case Study of West Sumatra Province in 2015-2019. *E3S Web of Conferences*, 325. <https://doi.org/10.1051/e3sconf/202132506001>.

- Patnaik, M. B. C. M., Satpathy, I., Tripathy, S., & Anirban. (2015). Labour migration and its effect on Urban India – An overview. *International Journal of Physical and Social Sciences*, 5(2), 178–185. <https://www.indianjournals.com/ijor.aspx?target=ijor:ijps&volume=5&issue=2&article=012>
- Radoine, H., Bajja, S., Chenal, J., & Ahmed, Z. (2022). Impact of urbanization and economic growth on environmental quality in Western Africa: Do manufacturing activities and renewable energy matter? *Frontiers in Environmental Science*, 10(September), 1–12. <https://doi.org/10.3389/fenvs.2022.1012007>
- Raihan, A., Rashid, M., Voumik, L. C., Akter, S., & Esquivias, M. A. (2023). The dynamic impacts of economic growth, financial globalization, fossil fuel, renewable energy, and urbanization on load capacity factor in Mexico. *Sustainability*, 15(18). <https://doi.org/10.3390/su151813462>
- Ratnasari, V., Audha, S. H., & Dani, A. T. R. (2023). Statistical modeling to analyze factors affecting the middle-income trap in Indonesia using panel data regression. *MethodsX*, 11, 102379. <https://doi.org/10.1016/j.mex.2023.102379>
- Rukmana, I. (2012). Pengaruh disparitas pendapatan, jumlah penduduk, dan inflasi terhadap pertumbuhan ekonomi di Jawa Tengah. *Economic Development Analysis Journal*, 1(1), 27–34. Retrieved from <http://journal.unnes.ac.id/sju/index.php/edaj%0APENGARUH>
- Satterthwaite, D. (2016). Urbanization and its implications for food and nutrition security. *Food Security*, 8(4), 703–712.
- Schrooten, M., Geldof, D., & Withaecx, S. (2016). Transmigration and urban social work: Towards a research agenda. *European Journal of Social Work*, 19(1), 18–30. <https://doi.org/10.1080/13691457.2014.1001725>
- Shahbaz, M., Topcu, B. A., Sarigül, S. S., & Doğan. (2023). Energy imports as an inhibitor of economic growth: The role of renewable and non-renewable energy consumption. *Journal of International Trade and Economic Development*, 33, 497–522. <https://doi.org/10.1080/09638199.2023.2237131>
- Sujatmiko, F., Rizky, B., & Gunawati, O. (2021). Eksistensi Middle Income Trap: Sebuah Kajian Empiris Tentang Fenomena Perlambatan Ekonomi Di Indonesia. *Inspire Journal of Economic Development Analysis*, 1(1), 13–30. <https://ejournal.uksw.edu/inspire>
- Syam, A. Y., Lisandri, Rizani, F., & Oikawa, S. (2018). Influence of PAD and DAU on Economic Growth with Capital Expenditure as an Intervening Variable on Regency and Municipal Government in South Kalimantan Province. *Journal of Research and Analysis in Economics*, 1(1), 1–9. <https://journal.stkipsingkawang.ac.id/index.php/JRAE/article/view/568>
- Tjiptoherijanto, P. (1995). Relationship Between Transmigration, Urbanization and Poverty Alleviation in Indonesia. *Ekunomi dan Keuangan Indonesia*, XLIII(1), 25–38. <https://www.lpem.org/repec/lpe/efijnl/199503.pdf>
- Todaro, M. P., & Smith, S. C. (2015). *Economic Development*.
- Torres, J. P., Kunc, M., & O'Brien, F. (2017). Supporting strategy using system dynamics. *European Journal of Operational Research*, 260(3), 1081–1094. <https://doi.org/10.1016/j.ejor.2017.01.018>
- Ulucak, R., Erdogan, F., & Bostanci, S. H. (2021). A STIRPAT-based investigation on the role of economic growth, urbanization, and energy consumption in shaping a sustainable environment in the Mediterranean region. *Environmental Science and Pollution Research*, 28(39), 55290–55301. <https://doi.org/10.1007/s11356-021-14860-z>
- Wajid, S. A., & Salita. (2023). Identifying threshold level of urbanization for economic growth in developing and developed Asian economies. *Journal of Economic Sciences*. <https://doi.org/10.55603/jes.v2i2.a3>
- Wibowo, T. (2017). Ketimpangan pendapatan dan middle income trap (Income inequality and middle income trap). *Kajian Ekonomi dan Keuangan*, 20(2), 111–132. <https://doi.org/10.31685/kek.v20i2.184>

- Widyastuti, O. R., Khoirudin, R., & Dahlan, U. A. (2023). Middle Income Trap in Indonesia and Its Analysis. *COSTING Journal of Economic Business and Accounting*, 7, 159–171.
- Verico, K. (2021). Global pandemic 2020: Indonesia's output gap and middle-income trap scenario. *LPEM-FEBUI Working Paper*.

Biographies of Authors

Yusuf Kristiadi, School of Environmental Science, University of Indonesia.

- Email: yusuf.kristiadi@ui.ac.id
- ORCID: <https://orcid.org/0000-0002-8308-2165>
- Web of Science ResearcherID: <https://sciprofiles.com/profile/YusufKristiadi>
- Scopus Author ID: N/A
- Homepage: N/A

Herdis Herdiansyah, School of Environmental Science, University of Indonesia.

- Email: herdis@ui.ac.id
- ORCID: <https://orcid.org/0000-0003-2684-3551>
- Web of Science ResearcherID: <https://sciprofiles.com/profile/1104432>
- Scopus Author ID: 57170905600
- Homepage: <https://sinta.kemdikbud.go.id/authors/profile/6883062>