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The Impact of Internal Migration on Population Growth Inequality between Java and Other Regions of Indonesia: A Literature Study of Indonesian Demographic

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Abstract
The imbalance in population growth and distribution between Java and regions outside Java has long been a persistent demographic phenomenon in Indonesia. Internal migration is one of the main factors contributing to this condition, as population movements tend to be heavily concentrated toward Java. This study aims to analyze the effect of internal migration on population growth in Java, its impact on population growth in regions outside Java, and its role intensifying regional population distribution inequality. This research employs a literature-based qualitative descriptive approach, utilizing secondary data from the 2010 and 2020 Population Censuses, migration statistics published by the Central Statistics Agency, and relevant scientific journals. The findings indicate that internal migration accelerates population growth on Java Island, slows population growth in regions outside Java, and reinforces spatial inequality in population distribution.

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Keywords: Regional Inequality, Internal Migration, Java Island, Population Growth

Introduction

Java Island has a relatively higher economic growth rate compared to other regions in Indonesia, making it a major destination for internal migration. As one of the main centers og economic activity, Java also has the largest population in the country. Moreover, Java is a strategic region because it contributes the largest share to Indonesia's national Gross Domestic Product [GDP]. Java consists of six provinces, namely DKI Jakarta, West Java, Central Java, DI Yogyakarta, East Java, and Banten. Over the last five years (2019-2023), the average contribution of these six provinces to the national GDP reached approximately 57.97 percent. According to the 2015 Population Census, with an area of 128,297 km² and a population density of 20,902 people/km^2, Java is the most densely populated island in Indonesia [1].

The imbalance in population growth in Indonesia represents a long-standing structural demographic phenomenon, particularly between Java and regions outside Java. As the center of economic activity, government administration, and national infrastructure development, Java accommodates a very large proportion of the population despite contributing only a relatively small share of the country's total land area. This condition reflects an unequal pattern of population distribution shaped by centralized development policies from the colonial period through the post-independence era, as well as by persistent disparities in economic and social opportunities between regions. This imbalance is not only driven by natural population growth, but is also reinforced by inter-island population mobility, which historically and structurally has positioned Java as the primary destination [2].

In line with these conditions, internal migration has become one of the key components in population change, alongside fertility and mortality. Internal migration refers to population movement within a country, for example, between provinces, regencies, or cities, including rural-to-urban migration and movements across lower administrative units such as subdistricts and villages. In the Indonesia context, internal migration plays a significant role in reshaping population structure and distribution, particularly

through the movement of the productive age population from rural areas and regions outside Java toward urban centers in Java. These movements are generally driven by disparities in employment opportunities, access to education, and the availability of better social facilities in destination areas. Therefore, internal migration cannot be separated from the broader context of regional development inequality [3].

These disparities in mobility and population concentration have a direct impact on uneven population distribution patterns. Areas with high population density, especially on the island of Java, face various problems such as pressure on environmental carrying capacity, land constraints, increasing settlement density, and a heavy burden on infrastructure and public services. Conversely, regions outside Java with relatively low population densities often experience labor shortages, low utilization of regional potential, and slower economic growth. These conditions have direct implications for the effectiveness of national development and have the potential to widen the gap between regions if not addressed systematically [4].

In addressing these complex issues, demographic analysis plays a crucial role in national development planning. Demographic studies not only focus on population size, but also cover age structure, migration patterns, and population change dynamics that affect development needs in the short and long term. The integration of demographic data and analysis into the development planning process is crucial to anticipate the impacts of rapid urbanization, optimize the utilization of the demographic bonus, and control population pressure in densely populated areas. Without comprehensive demographic analysis, development policies risk being misguided and potentially causing structural problems in the future [3].

The link between demographic dynamics and population change with regional development planning is reflected in urbanization and transmigration policies. Urbanization that takes place without adequate control has the potential to exacerbate regional inequality and increase the burden on cities. Conversely, the transmigration program is designed as a strategic instrument to encourage population distribution while accelerating regional development outside of Java. However, the effectiveness of these policies is highly dependent on a deep understanding of the demographic characteristics of the areas of origin and destination. Therefore, demographic analysis is a fundamental basis for formulating regional development policies, controlling urbanization, and managing transmigration in a sustainable and equitable manner [4].

Internal migration is the movement of people from one administrative region to another within a country with the intention of settling there, either permanently or temporarily [5]. In demographic studies, internal migration is distinguished from non-permanent mobility because it involves a change of residence that is recorded administratively, such as moving between districts, provinces, or islands. In Indonesia, internal migration is an important component in changes in population structure and distribution, in addition to fertility and mortality.

According to the Central Statistics Agency [BPS], internal migration is defined as the movement of people across administrative boundaries within a certain period of time, which can be identified through the concepts of lifetime migration and recent migration [5]. Lifetime migration refers to residents whose current place of residence is different from their place of birth, while recent migration refers to residents who have moved within the last five years. Internal migration is the movement of people between administrative regions within a country, reflected in changes of residence within a certain period. In the context of Indonesia, internal migration is generally measured using the concept of recent migration, which is the movement of people based on the difference between their place of residence at the time of enumeration and their previous place of residence within the last five years [6].

Internal migration can be classified into several forms [7]. First, rural-urban migration, which is the movement of people from rural to urban areas, generally triggered by differences in employment opportunities and social facilities. Second, urban-urban migration, which often occurs between metropolitan areas and industrial areas. Third, rural-rural migration, which is often related to transmigration programs or the opening of new areas. In addition, internal migration can also be distinguished based on its nature, namely permanent migration and temporary migration, such as circular migration and seasonal migration.

The motives for internal migration are diverse and generally interrelated [8]. Economic factors are the main motive, particularly differences in employment opportunities, wage levels, and access to the formal sector. In addition, social factors such as education, health, and social networks also play an important role in encouraging population movement. Demographic factors, such as age and marital status, as well as structural factors in the form of development disparities between regions, also influence the decision of individuals or households to migrate.

Population growth is the change in the population of a region over a certain period of time, which is influenced by three main components, namely fertility, mortality, and migration [9]. Fertility reflects the birth rate, mortality reflects the death rate, while migration reflects the movement of people into and out of a region. In a regional context, migration is often a dominant factor explaining differences in population growth rates between regions, especially in developing countries such as Indonesia.

Population distribution refers to the pattern of population spread in a geographical area [5]. Uneven distribution can create areas with very high density on one side and areas with low density on the other. In Indonesia, population distribution shows a strong concentration on the island of Java, even though its area is relatively small compared to areas outside Java. This condition is influenced by historical, economic, and centralized development policy factors.

Population growth inequality occurs when the growth rates between regions differ significantly and persist over the long term [10]. This inequality not only reflects differences in demographic dynamics but also indicates economic and social inequality. Internal migration often reinforces this inequality because it tends to flow to more developed regions. The island of Java is the region with the highest population concentration in Indonesia [4]. This pattern has existed since the colonial era and continues today due to the accumulation of economic, industrial, and governmental activities. In contrast, areas outside Java have relatively low population densities with a more dispersed distribution, although some areas have experienced rapid growth due to natural resource and infrastructure development.

Demographically, Java Island is characterized by high density, rapid urbanization, and a predominance of

productive-age residents due to inward migration [3]. Regions outside Java tend to have a younger population structure in some areas, but also face the challenge of outward migration of productive-age residents. These differences in characteristics have implications for regional development dynamics and disparities.

Ravenstein's migration theory states that migration is influenced by distance, the size of the destination area, and economic opportunities [11]. One of Ravenstein's laws of migration states that migration flows tend to flow towards economic and industrial centers. This theory is relevant to explain the dominance of Java as a destination for internal migration in Indonesia. The push–pull theory explains migration as the result of interaction between push factors in the area of origin and pull factors in the destination area [8]. Push factors include limited employment opportunities and low income, while pull factors include economic opportunities, educational facilities, and better infrastructure. This theory is widely used in studies of internal migration in Indonesia because it is able to explain regional disparities. The demographic transition theory explains changes in fertility and mortality patterns in line with the development process [12]. At a certain stage, migration becomes an important component of population growth, especially in areas experiencing rapid urbanization. This theory helps to understand the relationship between internal migration and changes in the population structure in Java and outside Java. This theory emphasizes that development does not occur evenly across space, but is concentrated in certain regions [13]. This development al inequality drives migration flows towards more developed regions and reinforces population concentration. The core–periphery theory explains the relationship between advanced central regions and underdeveloped peripheral regions [14]. In the context of Indonesia, Java Island acts as the core region, while most regions outside Java function as peripheral regions. Internal migration is the main mechanism connecting these two regions. The theory of economic concentration and urbanization emphasizes that economic activity tends to be agglomerated in certain regions, thereby attracting large numbers of people [15]. This process explains why urban areas on the island of Java continue to experience rapid population growth. The theory of urbanization and regional aggregation explains that population growth and economic activity tend to be concentrated in urban areas that have advantages in terms of access, infrastructure, and economic networks. Urbanization is seen as a process of population migration from rural to urban areas that occurs in tandem with the structural transformation of the economy from the primary to the secondary and tertiary sectors. This process leads to regional aggregation, namely the concentration of population, capital, and production activities in certain locations, thereby creating regions with high density and faster population growth rates than surrounding areas [7].

In the Indonesian context, this theory is relevant to explain the strengthening of population concentration in major cities on the island of Java, such as Jakarta, Bandung, Surabaya, and their surrounding metropolitan areas. Regional aggregation promotes economic efficiency and growth, but on the other hand, it increases spatial inequality because areas outside urban centers experience an outflow of productive-age population. Thus, urbanization and regional aggregation are important mechanisms that link internal migration with population distribution inequality between Java and outside Java [15].

Various studies on internal migration in Indonesia indicate that Java remains the primary destination for population movements, particularly from Sumatra, Sulawesi, and Nusa Tenggara [16]. Research by Saputra and Budiarti shows that migration to Java is dominated by people of productive age and contributes significantly to regional population growth.

Other studies examining population growth disparities between Java and regions outside Java confirms that internal migration strengthens population concentration in Java while slowing relative growth in migrants' areas of origin [10]. Ananta *et al*. further demonstrate that these disparities are closely associated with differences in economic development and access to infrastructure.

International studies reveal a similar pattern, whereby internal migration tends to flow toward economic core regions and, in turn, widens regional disparities [17]. These findings reinforce the relevance of core–periphery and push–pull theories in explaining migration dynamics and regional inequalities in Indonesia.

Based on this background, this study examines the role of internal migration in shaping population growth dynamics in Indonesia, particularly between Java and non-Java regions. Specifically, it analyzes how internal migration influences population growth in Java and how these demographic changes affect population dynamics in regions outside Java. Furthermore, this study explores the extent to which internal migration contributes to disparities in population distribution between Java and other regions of Indonesia.

Method

This study employs a literature review with a descriptive qualitative approach to examine existing analyses on the impact of internal migration on population inequality between Java and regions outside Java. A literature review is a research method used to collect and analyze sources relevant to the topic under investigation [18]. This method involves the systematic collection, review, and analysis of various written sources including publications from the Central Statistics Agency (BPS), scientific journals, academic articles, and other official documents related to internal migration and population distribution in Indonesia.

The data used in this study consist of secondary data obtained from written sources relevant to internal migration and population inequality between Java and non-Java regions. The sources of data include population statistics published by BPS, particularly the 2010 and 2020 Population Censuses, migration statistics, and data on migrants characteristics by age group in Indonesia. Scientific journals are used to obtain findings from previous studies addressing internal migration, regional inequality, population growth, and urbanization, which serve as the theoretical and empirical basis for identifying pattern and assessing the impacts of internal migration on population change. In addition, books and demographic literature are used to strengthen the theoritical foundation, especially in relation to migration theories, population growth concepts, and population distribution dynamic. Research reports and other relevant academic documents are also employed to broaden perspectives and enrich the analysis and synthesis of the literature. Through the use of these various sources, this study seeks to present a comprehensive analysis of the impact of internal migration on population disparities between Java and regions outside Java.

Data collection in this study is conducted through documentary analysis. Documentary analysis is a data collection technique that utilizes documents or archives materials as sources of research information [19]. This process involves collecting, reviewing, and examining various documents and publications relevant to the research topic. After identifying and recording key data and information, the literature is screened and selected based on its relevance to the focus of the study.

The data analysis technique applied in this research is descriptive qualitative analysis with a literature synthesis approach. This technique is used to examine and integrate findings from literature related to internal migration and population growth in Indonesia, particularly in Java and regions outside Java. The documentary analysis is carried out in several stages:

1. searching for official publications from BPS, scientific journals, research reports, books, and demographic literature discussing internal migration, population growth, and regional disparities in Indonesia.
2. selecting documents by classifying and grouping findings based on their relevance to the research topic, namely internal migration and population inequality between Java and non-Java regions.
3. recording and synthesizing key data and information related to patterns of internal migration and population growth between Java and regions outside Java to identify general trends, similarities, differences, and research gaps.
4. interpreting the results using migration theories by organizing the literature according to thematic categories, such as the impact of internal migration on population growth in Java, its effect on population distribution in regions outside Java, and the resulting disparities in population distribution between Java and non-Java regions.

Results and Discussion

1. The effect of internal migration on population growth in Java.

Internal migration in Indonesia shows a strong pattern with Java as the main center of population mobility. Historically, Java's dominance in internal migration flows is rooted in colonial policies that exploited this region as a source of labor for economic development in other areas. This pattern continued in the post-independence era through transmigration programs aimed at reducing population density in Java, but at the same time confirming Java's position as the main axis of national population movement [2].

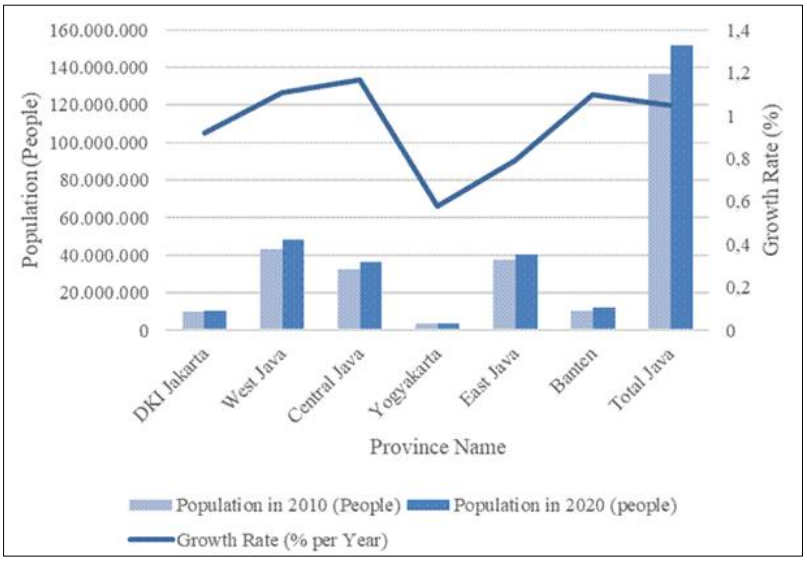
1.1. Population Growth Trends on the Island of Java

Based on the 2020 Population Census, the increase in population on the island of Java was influenced by a combination of natural growth and strong internal migration flows, especially to provinces with urban characteristics and metropolitan buffer zones such as DKI Jakarta, West Java, and Banten. Meanwhile, provinces such as Central Java and East Java continued to experience population growth, but at a relatively more moderate rate. This trend pattern confirms the important role of internal migration in shaping the dynamics and disparities of population growth on Java Island [5]. The following is a display of the population size and growth rate on Java Island, which can be seen in Table 1.

Table 1: Population Size and Growth Rate (LPP) in Java Island (2010–2020)

Province	Population in 2010 (million)	Population in 2020 (million)	Growth Rate (% per Year)
DKI Jakarta	9.6	10.5	0,92
West Java	43	48.2	1,11
Central Java	32.3	36.5	1,17
DI Yogyakarta	3.4	3.6	0,58
East Java	37.4	40.6	0,79
Banten	10.6	11.9	1,1
Total Jawa	136.3	151.3	1,05

Source: Central Statistics Agency (Census 2010 & Census 2020), processed.



Source: Central Statistics Agency (SP2010 & SP2020), processed.

Fig 1: Population Growth and Growth Rate in Java (2010-2020)

Based on [20, 5], Table 1 and Figure 1 show that during the decade from 2010 to 2020, the population of Java experienced significant growth. The population increased from 136,610,590 people in 2010 to 151,591,262 people in 2020. This increase resulted in an average population growth rate of 1.05 percent per year. Although Java as a whole showed high growth, there were clear differences in growth rates between provinces. Central Java recorded the highest growth rate, at 1.17 percent per year, followed by West Java with 1.11 percent and Banten with 1.10 percent. On the other hand, DI Yogyakarta had the lowest growth rate of 0.58 percent per year, indicating a different population dynamic compared to other provinces on Java Island. Overall, analysis of the tables and graphs shows that the increase in population on Java Island is not only due to natural growth but is also influenced by internal migration concentrated in certain provinces. This situation reinforces the concentration of population in Java and reflects the imbalance in population distribution across various regions.

1.2. Patterns of Internal Migration to Java

Internal migration patterns to Java Island can be analyzed through data on interregional population movements that describe the direction, intensity, and characteristics of migrants. Java Island remains the main destination for internal migration in Indonesia, especially interprovincial migration, with a higher proportion of migrants compared to other regions. This condition shows that Java Island still has a strong appeal as a center of economic activity, education, and access to more complete social facilities, so that encourages people from other regions to migrate to Java [5].

Table 2: Number of Incoming Migrants to Provinces on Java Island (SP2020 Results)

Destination Province	Total Incoming Migrants (Individuals)	Recent Incoming Migrants (Persons)
DKI Jakarta	3.330.457	212.457
West Java	5.184.814	716.469
Central Java	1.159.610	778.524
DI Yogyakarta	594.247	178.885
East Java	973.001	364.354
Banten	2.300.294	240.986
Total Jawa	13.542.423	2.491.675

Source: Central Statistics Agency, Indonesian Migration Statistics from the 2020 Long Form Census (Tables 3 and 7), processed.

Table 2 shows that Java Island remains the main destination for internal migration in Indonesia, both for lifetime migrants and risen migrants. Overall, the number of lifetime migrants reached more than 13 million, while risen migrants approached 2.5 million, indicating the high intensity of population movement to Java Island. West Java recorded the largest number of lifelong migrants, reflecting its role as a buffer zone for national economic activity. Meanwhile, Central Java was the province with the highest number of recent migrants, indicating the increasing attractiveness of this region in the most recent migration period. DKI Jakarta continues to function as a magnet for migration, although the latest migrant flow is relatively smaller than the accumulation of previous migrants. Other provinces such as DI Yogyakarta, Banten, and East Java show more moderate migration patterns in line with the characteristics of their regional functions. Overall, this pattern confirms that internal migration to Java Island is uneven across regions and contributes significantly to the dynamics of population growth and distribution on Java Island [21].

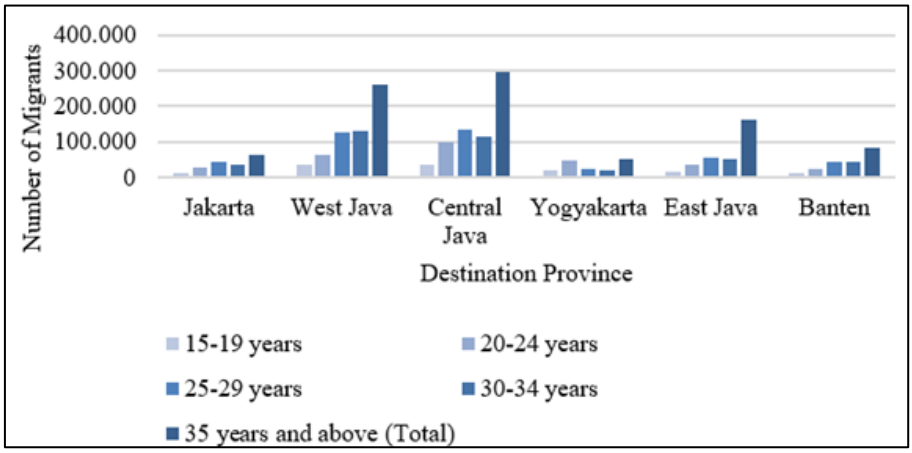
1.3. Characteristics of Internal Migrants on Java Island

The characteristics of internal migrants entering Java Island are dominated by young and productive-age populations. Migration data shows that the 15–29 age group is the most common group to migrate internally, both interprovincially and inter-island. The high mobility of this age group is related to life transition phases, such as continuing education, entering the job market, and seeking better economic opportunities, which are largely concentrated in the Java region. In addition, the 30+ age group also contributes significantly to internal migration to Java, particularly in relation to employment needs and improving family welfare. Conversely, the proportion of migrants in the children and elderly age groups is relatively smaller, because migration in these groups is generally family-based or limited by health factors and social ties in their area of origin. The age pattern of migrants has an impact on changes in the population structure of Java Island with an increase in the proportion of the productive age population, which has the potential to strengthen the workforce, but at the same time adds pressure on the provision of employment, housing, and public services [5].

Table 3: Distribution of Migrants in Java by Age Group

Target Province	15-19 years	20-24 years	25-29 years	30-34 years	35 Years and Above (Total)
Jakarta	12.897	29.417	43.911	35.825	62.125
West Java	35.395	62.231	125.257	130.169	259.306
Central Java	35.768	97.201	135.634	114.004	294.126
Yogyakarta	18.844	46.427	24.216	19.679	50.139
East Java	16.297	34.445	54.870	52.258	161.983
Banten	12.294	23.063	44.890	43.292	82.155

Source: Data processing results from Table 9.3, Indonesian Migration Statistics from the 2020 Long Form SP.



Source: BPS, Indonesian Migration Statistics from the 2020 Long Form (processed).

Fig 2: Distribution of Migrants on Java Island Based on Age Group (2020 Population Census Results)

Table 3 and Figure 2 show that internal migration to Java is dominated by young people and those of early productive age. The 20–24 and 25–29 age groups are the most likely to migrate to almost all provinces on Java. This pattern indicates that migration in the most recent period was mainly driven by the need for further education and job seeking, which are generally undertaken in the early stages of entering the workforce. Spatially, Central Java and West Java recorded the highest number of migrants in the 25–29 and 30–34 age groups, confirming the role of these two provinces as the main destinations for productive-age migrants. DKI Jakarta also shows a relatively high concentration of migrants in the younger age group, although the number is smaller than in the buffer provinces. DI Yogyakarta has a slightly different pattern, with a prominent proportion of migrants aged 20–24, reflecting the region's character as an educational center. Meanwhile, East Java and Banten show a more moderate migration pattern but are still dominated by the productive age group of. The 35+ age group has a lower number of migrants than the younger age groups, indicating that the tendency to migrate decreases with age. Overall, the age distribution of these migrants confirms that internal migration to Java is a phenomenon closely related to the life cycle of the productive age population. This condition has implications for an increase in the proportion of the workforce on the island of Java, while also adding pressure on the labor market, housing, and public services in the destination areas [21, 5].

1.4. The Role of Internal Migration in Population Growth on Java Island

Population growth on Java Island is the result of the interaction between natural growth and internal migration, with both contributing differently in terms of spatial and structural aspects. During the 2010–2020 period, Java Island experienced a significant increase in population with an average growth rate of 1.05 percent per year. Natural growth still plays a role in increasing the population, especially in provinces with large populations such as West Java, Central Java, and East Java. However, variations in growth rates between provinces indicate that natural growth alone does not fully explain the population dynamics on Java Island, especially in provinces with relatively high growth rates. On the other hand, internal migration has made an increasingly prominent contribution to population growth on Java Island. Migration data shows that Java Island has received more than 13 million lifetime migrants and nearly 2.5 million recent migrants, with a strong concentration in certain provinces. West Java and Central Java occupy the top positions as migration destinations, while DKI Jakarta continues to function as a migration magnet even though the latest migrant flow is relatively lower than in the previous period. This migration flow is age-selective, as it is dominated by young and early productive age groups, particularly those aged 20–29 years.

The dominance of productive-age migrants indicates that internal migration not only increases the population directly but also affects the age structure of the population on Java Island. Provinces with high numbers of migrants tend to have higher population growth rates, even though their natural growth rates are not always the highest. This indicates that internal migration acts as a factor that strengthens regional population growth, while also being the main explanation for the differences in growth rates between provinces on Java Island. Overall, the synthesis of population growth and internal migration data shows that population growth on Java Island is no longer driven solely by natural growth, but is increasingly determined by the dynamics of internal migration that is spatially and demographically concentrated. This condition reinforces population concentration in certain areas of Java and has the potential to widen the gap in population distribution between provinces if it is not balanced with more equitable and targeted regional development policies [21].

2. The impact of internal migration on population growth outside Java Island

Internal migration is one of the important factors affecting population growth dynamics in areas outside Java Island. Literature studies show that internal migration patterns in Indonesia are dominated by the movement of productive-age populations from areas outside Java to Java Island, which is influenced by differences in employment opportunities, access to education, and economic facilities between regions. This population shift has an impact on changes in the number and structure of the population in the region of origin, thereby potentially affecting the rate of population growth outside Java [22]. Therefore, this subchapter discusses the impact of internal migration on population growth in regions outside Java by reviewing migration patterns, migrant characteristics, and their implications for demographic changes in the region of origin.

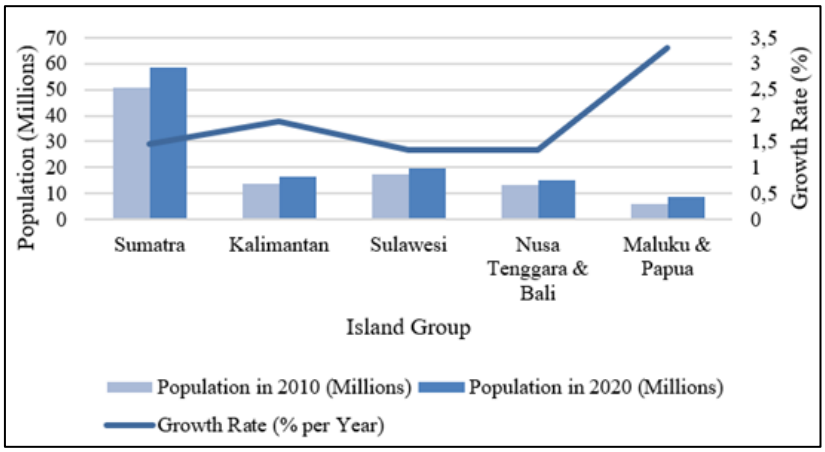
2.1. Population Growth Trends Outside Java Island

Population growth trends outside Java as a basis for comparing population changes between island groups in Indonesia. Data from the 2020 Population Census shows that although Java is still the region with the largest population concentration, other regions such as Sumatra, Sulawesi, Kalimantan, Bali, and Nusa Tenggara have also recorded significant population growth in recent decades, although the total number is still much lower than Java. This population distribution shows different demographic dynamics between islands and provides context for discussing the impact of internal migration on population growth outside Java [5, 23].

Table 4: Population Size and Growth Rate of Non-Java Island Groups (2010–2020)

Island Group	Population in 2010 (Millions)	Population in 2020 (Millions)	Growth Rate (% per Year)
Sumatera	50,63	58,56	1,46
Kalimantan	13,79	16,63	1,88
Sulawesi	17,37	19,9	1,35
Nusa Tenggara & Bali	13,07	14,96	1,35
Maluku & Papua	6,17	8,61	3,31

Source: Central Statistics Agency (SP2010 & SP2020), processed.



Source: Central Statistics Agency (SP2010 & SP2020), processed.

Fig 3: Population Growth Trendss Outside Java by Island Group 2010-2020

Based on Table 4 and Figure 3, areas outside Java showed an increase in population during the 2010–2020 period, with varying growth rates between regions. Sumatra, as the region with the largest population outside Java, increased from around 50.63 million in 2010 to 58.56 million in 2020, with a growth rate of around 1.46 percent per year. This pattern reflects the development of urban centers and economic activities outside Java Island, which has led to population redistribution between regions [24].

Kalimantan and Sulawesi recorded relatively higher population growth rates, at around 1.88 percent and 1.35 percent per year, respectively, while Maluku and Papua showed the highest growth rates, at around 3.31 percent per year, even though their populations are still relatively small. Research by Ananta *et al.* [10] confirms that development in eastern Indonesia has the potential to encourage inward migration, which has a direct impact on accelerating population growth, while also changing the structure of population distribution between regions in Indonesia. These differences in growth rates indicate that internal migration plays a role in shaping population growth dynamics outside Java, particularly through the movement of productive-age populations to regions experiencing accelerated development [25].

2.2. Patterns of Outward Migration from Outside Java

Migration patterns from regions outside Java are an important part of internal migration dynamics in Indonesia. Population movements from outside Java are generally influenced by differences in economic opportunities, access to education, and regional development disparities, which encourage people to move to areas that are considered more promising. This pattern contributes to changes in population distribution between regions and affects population growth in both the areas of origin and destination [26].

Table 5: Accumulation and Current Trends in Outward Migration from Outside Java to Java Island

Island Group	Lifetime Migration [Souls]	Recent Migration [Persons]
Sumatera	6.167.944	901.811
Kalimantan	891.743	325.600
Sulawesi	2.118.353	302.190
Nusa Tenggara & Bali	783.986	162.167
Maluku & Papua	457.437	146.083

Source: Central Statistics Agency, Indonesian Migration Statistics from the 2020 Population Census Long Form 9 Processed Data).

Table 5 shows that Java Island remains the main destination for internal migration from outside Java, both in the long term and medium term. Cumulatively, the largest lifetime migration comes from Sumatra Island, followed by Sulawesi and Kalimantan. A relatively similar pattern is also seen in temporary migration, indicating that the appeal of Java Island

is not only historical but also continues to this day. This situation reflects the strong role of Java Island as a center of economic, industrial, educational, and national government activities that continues to attract people from other regions [16].

Differences in migration contributions between regions indicate regional development disparities in Indonesia. Regions with closer geographical access and stronger economic ties to Java, such as Sumatra, tend to have higher migration rates than eastern Indonesian regions such as Maluku and Papua. This finding is in line with the theory of migration pull factors, in which the concentration of industrial sectors and employment opportunities in destination areas are the main determinants of migration flows [16]. In addition to regional structural factors, migration decisions are also influenced by individual and household characteristics, so that migration to Java is not solely driven by economic factors, but also by social and demographic considerations [27]. Overall, these data confirm that internal migration still contributes to population concentration on Java.

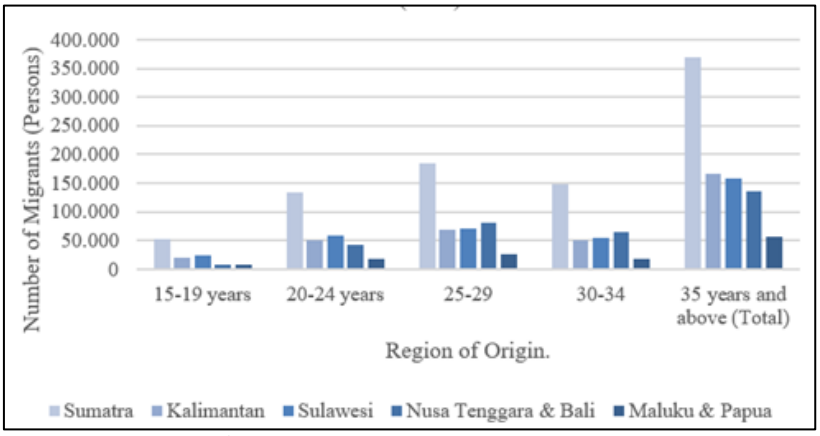
2.3. Characteristics of Migrants from Outside Java

The characteristics of internal migrants in Indonesia show specific demographic and socioeconomic patterns, whereby migrants generally come from the productive age group, are male, and have diverse educational and occupational backgrounds in line with their migration goals. Research shows that age, education level, marital status, and occupation are some of the important variables in determining who is more likely to migrate, as these factors are related to employment opportunities and the motivation to improve welfare, which are the main drivers of migration decisions [28].

Table 6: Distribution of Migrants from Outside Java by Age Group

Origin Island	15-19 Years	20-24 Years	25-29 Years	30-34	35 years and above (Total)
Sumatera	53.212	134.135	185.011	148.431	370.088
Kalimantan	19.805	49.771	68.126	51.575	165.735
Sulawesi	25.188	58.700	70.579	53.829	158.423
Nusa Tenggara & Bali	8.560	43.112	80.824	64.298	135.210
Maluku & Papua	7.150	18.331	26.114	17.189	56.453

Source: Data processed from Table 9.3 Long Form SP2020 BPS.



Source: Data processed from Table 9.3 Long Form SP2020 BPS.

Fig 4: Comparison of Age Groups of Migrants from Outside Java (2020)

The pattern of migration from outside Java shows that migration from outside Java is mostly carried out by the productive age group, especially young adults to middle-aged adults, who have the potential to seek educational and employment opportunities in destination areas such as Java. This pattern is consistent with research findings showing that younger age groups have a higher tendency to migrate than other age groups because they have the physical capacity and motivation to seek better economic and educational opportunities in urban centers [29]. This reinforces the understanding that internal migration in Indonesia is not only influenced by regional structural factors but also by the dynamics of age and individual life goals related to economic and educational mobility.

2.4. The Impact of Migration on Population Growth Outside Java

Internal migration is an important component of population growth dynamics because, in addition to births and deaths, population movements also determine changes in the number and composition of a region's population. When the productive-age population migrates from a region, especially to areas that offer more economic and educational opportunities, the region of origin tends to experience a decline in its contribution to population growth; this can be seen in the decline in the working-age population in the region of origin and the potential slowdown in the local population growth rate. This phenomenon is consistent with demographic studies showing that migration tends to shift the population, so that areas of origin with large numbers of migrants experience a redistribution of population to other areas that are migration destinations, resulting in changes in age structure and the possibility of accelerated growth in destination areas, while the "leaving" areas experience a relative slowdown in growth compared to other regions [30].

3. The Role of Internal Migration in Increasing Population Distribution Inequality between Java and Outside Java

Internal migration is one of the main factors contributing to

population distribution inequality between regions in Indonesia, particularly between Java and areas outside Java. The dominant migration flow to Java has led to an increasingly high concentration of population in that region, while the migrants' areas of origin have experienced a decline in population, especially among the productive age group. This condition shows that internal migration not only affects population dynamics but also reinforces spatial inequality that has been formed due to differences in development levels and economic opportunities between regions [10, 16].

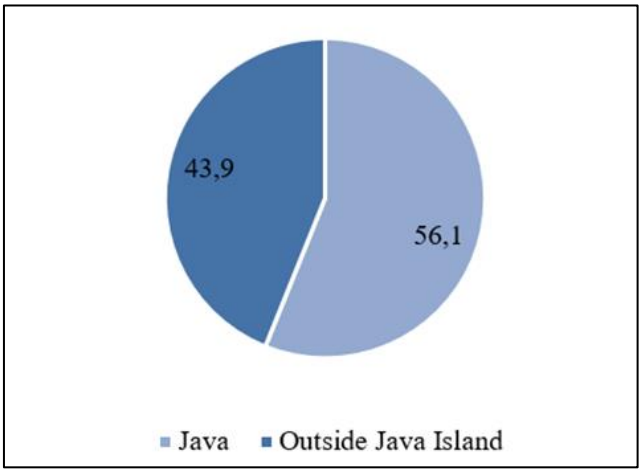
3.1. Population Distribution between Java and Outside Java

To understand the imbalance in population distribution between Java and areas outside Java, it is necessary to look at empirical data on the national population distribution. The following population distribution data is presented to show the pattern of population concentration that has formed as a result of internal migration dynamics, as discussed in the previous subsection. Through the presentation of tables and graphs, it is hoped that the differences in population proportions between regions, which form the basis for demographic inequality analysis, will be clearly visible [5, 8].

Table 7: Distribution of Indonesia's Population by Region (2020)

Region	Population (Persons)	Percentage (%)
Java Island	151,591,243	56.10
Outside Java Island	118,615,115	43.90%
National Total	270,206,358	100.00%

Source: Data processed from the 2020 Long Form SP2020 BPS results.



Source: Data processed from the 2020 Long Form Population Census Results of the Central Statistics Agency (BPS).

Fig 5: Persentage Comparison of The Population of Java and Outside Java

Based on Table 7, the distribution of Indonesia's population in 2020 shows that Java Island is inhabited by 151,591,243 people or around 56.10% of the total national population, while areas outside Java Island are inhabited by 118,615,115 people or 43.90%. This data indicates a significant imbalance in population distribution, considering that the area of Java Island is relatively smaller than the areas outside Java. This population concentration reflects the role of Java Island as a center of economic activity, government, and social services that is highly attractive to people from other regions [5].

This finding is reinforced visually by Figure 5, which shows a comparison of the percentage of population between Java and outside Java. The figure shows that more than half of Indonesia's population is concentrated on Java, while areas outside Java account for less than half of the national population. This visualization confirms that the imbalance in population distribution is not merely a numerical phenomenon, but rather a long-term structural pattern. This condition is in line with the push-pull theory, which explains that differences in economic opportunities, infrastructure, and social facilities between regions are the main factors driving population migration to Java. This finding reinforces the previous discussion on the motives for internal migration, which shows that the decision to migrate is mainly driven by economic factors, access to education, and the availability of better infrastructure on the island of Java compared to the region of origin [7, 8].

3.2. Internal Migration as a Factor Shaping Population Distribution Inequality

Based on Table 7, the Java region shows a much higher population density compared to regions outside Java. This high population density reflects the demographic pressure caused by internal migration flows that are concentrated towards Java Island. This condition shows that internal migration not only has an impact on population growth, but also on the intensity of land use, which in turn has implications for the increasing need for infrastructure, housing, and public services in the destination areas [5].

The high population density on the island of Java cannot be separated from the characteristics of internal migrants themselves. As shown in Table 3 and Table 6, internal migration in Indonesia is dominated by young and productive-age people with the main motives being economic and educational. These characteristics cause migration destination areas, especially the island of Java, to gain additional economically active residents, while the areas of origin experience a loss of potential labor. This pattern reinforces population concentration and widens the density gap between Java and non-Java regions [7, 8].

This phenomenon is in line with the theory of urbanization and regional aggregation, which explains that people tend to concentrate in areas that have agglomeration advantages, such as the availability of jobs, market access, and more complete social facilities. In this context, Java Island functions as a core region that continues to attract people from peripheral regions, so that the process of internal migration forms a cumulative cycle that reinforces the imbalance in population distribution between regions [14, 15].

Thus, internal migration acts as the main mechanism linking the characteristics of migrants with the increasing population density on the island of Java. The impact of this density is not only demographic, but also reflects structural inequalities in regional development. Without equitable economic opportunities and infrastructure development outside Java, this selective pattern of internal migration has the potential to further widen population density gaps and regional disparities in Indonesia [10, 13].

3.3. Implications of Population Distribution Inequality between Regions

Population distribution inequality, which is exacerbated by internal migration, has broad implications for national development. On the one hand, Java faces demographic pressures in the form of high population density, increasing housing needs, and pressure on infrastructure and public services. On the other hand, regions outside Java face challenges in the form of a decline in the productive-age population, which has the potential to slow economic growth and regional development. This condition is in line with the theory of development inequality, which states that development tends to be uneven and benefit certain regions in the long term [13].

Without policies to promote equitable development and strengthen growth centers outside Java, internal migration has the potential to continue widening the gap between regions. Therefore, understanding the role of internal migration in increasing population distribution inequality is important as a basis for formulating more balanced and sustainable regional development policies. Thus, the results of the analysis in this subchapter confirm that internal migration is a key factor that needs to be considered in efforts to reduce demographic and development inequalities between regions in Indonesia [3, 10].

4. Conclusion

Based on the results of the analysis and discussion of internal migration and population distribution inequality in Indonesia, several conclusions can be drawn. Internal migration has been shown to significantly affect population growth on the island of Java. Inward migration flows, which are dominated by people of productive age with economic and educational motives, have contributed to an increase in population size and accelerated population growth in this region. This condition has made Java the region with the highest population concentration in Indonesia, in line with its role as a center of economic and social activity [5, 7, 8].

Internal migration also affects population growth in areas outside Java. The movement of people from regions outside Java to Java has led to population decline, particularly among the productive age group, in the migrants' areas of origin. This situation has the potential to slow population growth and weaken the human resource base needed to support development in regions outside Java [3, 10].

Furthermore, internal migration plays an important role in increasing the imbalance of population distribution between Java and non-Java regions. The growing concentration of population in Java and the reduction of the productive population in regions outside Java indicate that internal migration reinforces existing spatial inequalities. These findings suggest that internal migration is not merely a demographic phenomenon, but is also closely associated with regional development disparities, as explained in the core–periphery theory and regional development inequality [13, 14].

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