Abstract: The population transition theory provides a macro-level overview where one can see the connection between social and economic development and the progression of population transition. This study conducts a systematic analysis of Belarus’ social development and immigration trends over the last 30 years to investigate the regularities and generalities in its population development. Research has shown that during this period of demographic transition Belarus has characteristics that are different from the demographic transition theory. Belarus’ demographic development is characterized by negative population growth, an imbalance in the sex ratio and an aging demographic structure, all of which are inherent to the period of demographic transition. The demographic transition of Belarus is characterized by the following trends: greater difficulty in changing fertility attitudes, a lack of a stable external environment for population development, the absence of large-scale population outflow, stability with respect to the composition of the main ethnic groups, and the susceptibility of the population to chronic diseases. The solution requires a scientifically-integrated programme for the sustainable development of the population in a stable and orderly socio-economic environment. Future research should focus on the problems of migration within the region and the impact of ethnic, religious and cultural spheres on demographic development.

Keywords: Belarus, population decline, population development, population transition, sex ratio imbalance

Population transition is a common and significant phenomenon in the history of human development. Since the Industrial Revolution, the process of population transition has been continuously advancing. Due to differences in historical processes, development stages, and national contexts, population transition varies greatly among different countries and regions. As a result, analyzing population transition is an important subject when studying other countries. Historical studies
have found that during the modern era, the process of population transition is often accompanied by a dividend period of economic growth. After experiencing the demographic shift resulting from declining mortality and fertility rates, different countries tend to experience a rise in the proportion of working-age population, with growth rates exceeding those of both elderly and children populations. This indicates that labor resources are relatively abundant, and the labor force participation rate is high, while the productivity burden is eased on the population, which ultimately benefits economic development.

Slavic people have the largest population and widest distribution in Eastern Europe, with a considerable number of Eastern European countries being classified as Slavic nations. According to the United Nations' regional classification, Europe is divided into four regions: East, West, South, and North. Belarus, along with Bulgaria, Czechia, Hungary, Poland, Moldova Republic, Romania, Russian Federation, Slovakia, and Ukraine are all classified as Eastern European countries. As one of the representative Eastern Slavic nations, Belarus is currently undergoing a population transition. As Belarus and China celebrate 31 years of diplomatic relations and strengthen their “all-weather strategic partnership of cooperation”, it is important to examine the theory and current situation of population development among Slavic nations, with Belarus as a representative case study. This paper systematically analyzes Belarus’ social development and immigration trends in the past 30 years, aiming to examine the pattern and common problems in its population development. Such an analysis has implications for gaining a better understanding of Belarus and other ethnic nations.

1 Implications of Demographic Transition Theory

Demographic transition theory is a modern demographic concept that is widely applied in population theory. It is typically represented by the evolution of birth rates, death rates, and natural growth rates, which reflect changes in the inherent reproduction of a population. As such, it is known as demographic transition (Li, 2004). Malthus was one of the first scholars to discuss population development in his work “An Essay on the Principle of Population”. He argued that population would grow at a “geometric rate” if left unchecked, surpassing society’s ability to produce and sustain its population, which grows at an “arithmetic rate”. This would lead to active factors such as war, famine, and disease, as well as passive factors such as delayed or even no marriage, and no childbirth, which would increase the number of deaths and decrease population growth rate. In such circumstance, the characteristics of population growth would exhibit high birth and death rates coexisting, eventually stabilizing with the level of social development (Malthus & Zhu, 1992).
Since the mid-19th century, societies in Western Europe represented by countries such as the UK and France have experienced significant growth in productivity. However, during this same period, natural population growth rates have declined. Malthus’ viewpoint on population transition did not fully align with the evolving reality of society because it failed to explain the transition of population through the internal mechanisms of demographic changes.

Demographic transition theory is a theoretical analysis that utilizes actual historical data on the basis of macroeconomic analysis of socio-economic development, and combines the analysis of the inherent mechanisms of population changes. The modern theory of population transition originated in the early 20th century within Western industrial societies. It used historical data on birth and death rates as well as socio-economic development to describe and explain population development. This framework also predicted future trends in population growth. After continuous enrichment and expansion, demographic transition theory has developed three fundamental viewpoints. The first viewpoint suggests that population development is closely linked to socio-economic development and often analyzes population transition from an economic perspective. The second viewpoint argues that population transition is mainly achieved through changes in birth and death rates, with different stages characterized by different types of development processes. During this process, the balance shifts from the old equilibrium to a new one. The third viewpoint focuses on the initial stage of population transition—the shift from agricultural society to modern industrial society—where the decline in birth rate lags behind the decline in death rate. These two rates have different initiation points and different speed of change, resulting in a “time lag” (Li, 2004, p. 327). In practice, there is significant controversy surrounding the regional and temporal applicability of the three viewpoints in the theory of population transition. No single perspective can fully apply to all countries. Consequently, sub-level theories such as fertility transition theory and mortality transition theory have been proposed and used in certain analyses as alternatives to the theory of population transition. Undeniably, the basic tenets of population transition analysis provide a favorable theoretical tool for analyzing the historical and current development of a country’s population and predicting future trends. Through the three fundamental principles of population transition theory, it is possible to conduct both macroscopic and systematic analyses of the population development process, as well as micro-analyses that incorporate social groups such as individuals and families into dynamic analyses, forming the basis for macroscopic analysis. After the demographic transition theory was gradually accepted, scholars in subsequent research have used different perspectives to classify the stages of population development in developed European countries, and have developed corresponding theories and empirical models of demographic
transition. The demographic transition theory has been extensively tested and has undergone significant development and has found greater application.

European countries completed the population transition earlier and partially validated some of the theory's points. In this regard, A. Landry from France, while W.S. Thompson and F.W. Notestein from the United States are the representatives. They proposed the well-known three-stage model of demographic transition. In reality, developed European countries completed the first demographic transition stage in the first half of the 20th century and achieved a stable, balanced population structure. After World War II, Europe experienced a second demographic transition stage marked by the arrival of a fertility-compensating “baby boom,” cultural and social changes in childbirth practices, and aging. The second demographic transition stage was significantly influenced by cultural and social factors. During the third demographic transition stage, socio-economic conditions were relatively advanced with fundamental changes in attitudes towards childbirth, leading to negative population growth and labor shortages.

As socio-economic development continues, the world's population continues to grow, but at a decreasing rate. Now, it is at a slow rate in the modern stage of population transition. However, the modern Western theory of demographic transition has many shortcomings. When viewed from different continents and regions, there are significant differences in population development stages and trends. The fundamental reason is that these theories have not yet shaken off the influence of Malthusian population theory, and only focus on the phased characteristics of the population transition process (Galor, 2006), neglecting the influence of culture such as ethnicity, religion, and region, and failing to fully analyze the decisive impact of social systems.

The purpose of this paper is to establish a comprehensive analytical model that can effectively describe the characteristics of the population transition process by analyzing the status of population development in Belarus. This model aims to provide a unified framework for describing the main features of the Belarusian population and exploring the key factors involved in the population transition process. Ultimately, this study seeks to offer new insights and focal points for understanding the population situation in Slavic countries and addressing China's current low fertility rate issue.

2 Population Development Trends and Population Transition in Belarus

Belarus is located at the intersection of Western Europe, Eastern Europe, and Slavic Orthodox civilization. It is an important geopolitical crossroads for the European
Union, the Commonwealth of Independent States, and especially Russia. Historically, Belarus was a traditional route from the Soviet Union to Central Europe and Western Europe before the collapse of the Soviet Union. Based on these geopolitical characteristics, and benefiting from the blending of diverse aspects such as ethnicity, religion, language, customs, social features, literature, and art, Belarus has multiple ethnic groups and religions in the Eurasian region, forming a multicultural society. A multicultural society has brought about a foundation of tolerance and respect for Belarus, and its population and social development also possess diversified characteristics. However, it also brings the risk of internal conflicts to Belarus’ social development.

The complex ethnic relations and fusion in Eastern Europe are constructed by the historical cross-regional migration of ethnic groups, diverse ethnic blending, and ethnic conflicts. Currently, Belarus is in the late stage of demographic transition, with a sustained decline in fertility rates and a negative population growth rate. However, Belarus is still in the demographic dividend period, with a relatively high average education level, high labor force participation rate, continuous improvement in health conditions, and good economic development status. Belarus can provide a research example for observing the Eastern European region and Slavic ethnic groups.

2.1 Population Growth Trends in Belarus

During the Soviet era, particularly in the late Soviet period, Belarus experienced rapid population growth. This trend was similar to other Soviet republics and was a notable characteristic of the national population in Eastern European countries during this time. According to the United Nations World Population Prospects 2022 data, as the fertility rate decreased, Belarus’ population growth trend could no longer be sustained. The population reduced with fluctuation from its highest point of 10.43 million in 1990 to 10.26 million in 2000, a decrease of 1.6%. From 2001 to 2022, the population continued to decline annually, dropping to below 10 million, with a faster rate of decrease. Between 2000 and 2010, the population decreased by 5.1%, and in 2013, the population dropped to 9.69 million, equivalent to 92.9% of the 1990 population. There was a brief population increase trend between 2013 and 2016, but the trend did not continue. In 2020, the population further declined to 9.63 million, which is equivalent to 92.3% of the country’s population in 1990 before its independence. From 2011 to 2022, the total population growth of Belarus remained at zero to negative (see Figure 1).

The population development situation in Belarus is similar to that of other Eastern European countries. From 1990 to 2022, ten Eastern European countries
faced a significant decline in their populations. According to the United Nations World Population Prospects data for 2022, except for the slight increase in population in Czechia (+1.84 %), Poland (+4.72 %), and Slovakia (+7.22 %) compared to 1990, other countries’ populations have experienced varying degrees of decline. In terms of the magnitude of decline from largest to smallest, they are Bulgaria (−29.35 %), Moldova (−27.00 %), Ukraine (−22.66 %), Romania (−13.92 %), Belarus (−8.63 %), Hungary (−3.94 %), and Russia (−2.22 %). In 2022, Belarus ranked seventh out of the ten Eastern European countries in terms of total population, which is two places lower than its ranking in 1990 (see Figure 2). Focusing on Slavic countries, all East Slavic countries face a lack of sufficient population.

Belarus, Russia, and Ukraine are all East Slavic nations that face a serious decline in total population. The population problems these countries face are not limited to population decline but also include issues such as gender imbalance, low fertility rates, and deteriorating population health.

### 2.2 Structural Changes in the Population of Belarus

The age structure of the population of Belarus has continued to shift older since before 1950. Figure 3 shows the population age pyramid of Belarus. Based on the United Nations World Population Prospects 2022 and data from the Belarus Statistics Bureau, it can be observed that the number of young people decreased gradually from 1990–2020. The proportion of children aged 0–14 years decreased from 22.9 % in
Figure 2: Changes in the number of people in Eastern European countries in 1990 and 2022. 

Figure 3: Age-sex pyramid of the population of Belarus in 1950, 1990, 2010 and 2020. 
1990 to 14.9% in 2010, though then increased to 17.2% in 2020. The proportion of elderly people aged 65 and above gradually increased from 10.7% in 1990 to 16.3% in 2015, and then continued to rise to 17.2% in 2020. In terms of labor force burden and social support burden, the level of social burden in Belarus after independence is moderate and has been continuously decreasing. The aging trend in Belarus will become more evident in the future, and the proportion of elderly people aged 65 and above will continue to increase, reaching 24% by 2050. The population pyramid also shows a tendency towards a shrinking shape.

The gender structure of the Belarusian population is severely imbalanced, with a shortage of male population compared to female population since the 1950s. This gender-age structure difference has become more apparent with the increasing of age during different periods. The main cause of this difference is the higher mortality rate among men than women in Belarus. The sex ratio of the total population in Belarus has been decreasing since 1990, and has remained at around 85–86 since then. The sex ratio of the newborn population has been maintained at 107 or 106, which is within the normal range. Furthermore, compared with other Eastern European countries, the sex ratio of the total population in Belarus was the lowest in 2022, even lower than that of Russia. Figure 4 depicts the sex ratio of the population in ten Eastern European countries. Belarus, along with other East Slavic nations such as Russia and Ukraine, also experiences a gender imbalance issue (male population is lower than female population). Looking from a longitudinal time dimension, most Slavic countries show an increased disparity in gender gaps in 2022 compared to that of 1990. Apart from natural physiological reasons for differences in male and female

![Figure 4: Sex ratio of total population in ten Eastern European countries in 1990 and 2022. Data source: United Nations, DESA, Population Division (2022). World Population Prospects 2022.](image)
mortality rates, the leading cause of high mortality among men in Belarus is unhealthy lifestyles, such as alcoholism and smoking, which result in chronic diseases and premature deaths (WHO, 2022). Belarus has currently introduced and executed a series of health policies and preventive measures to reduce the premature mortality rate among men.

### 2.3 Population Transition and Social Development in Belarus

Currently, the population transition in Belarus has entered a slow-growth mode. The Demographic transition theory and the analysis of several demographic transitions can bring a new perspective to the analysis of population and social issues (Chen, Huang, & Tong, 1999). Figure 5 shows the current population growth pattern in Russia. Overall, the current population growth pattern in Belarus is in the third and fourth stages, namely, the stage of negative growth. In 1950, the birth rate in Belarus was as high as 21.31 ‰, the death rate was 10.61 ‰, and the population growth rate with migration factors included was −0.5 ‰. Subsequently, the population growth rate increased to 1.26 ‰ in 1960. Before independence in 1990, the birth rate in Belarus was 14.21 ‰, the death rate was 13.43 ‰, and the population growth rate was 0.34 ‰. After independence until 2000, Belarus experienced multiple political events and economic recessions, leading to a decline in the birth rate to 9.60 ‰, an increase in the death rate to 15.48 ‰, and a sharp drop in the population growth rate to −0.49 ‰. Therefore, the 1990s were the most complicated period in the history of Belarus after independence, and the economic crisis had many negative impacts on the society. Due to economic instability and social disorder, this brought uncertainty

![Figure 5: Population transition and growth rate changes in Belarus, 1950–2022.](image)

about the future of Belarus to people. In the early stage of independence, the population of Belarus lacked a stable and secure development environment.

Belarus is facing a more severe risk of population decline during the population transition, but it is still in the demographic dividend period, and the level of human capital is above average globally. From the perspective of demographic transition, Belarus faces different population situations and issues compared with other developed European countries. Developed countries have higher social welfare and superior living conditions, but they generally face serious problems of low fertility rates and aging due to having completed the population transition earlier. Belarus faces a double crisis of economic recession and population decline, but from the changes in population structure and labor force participation rate (see Figure 6), Belarus is still in the demographic dividend period, with a continuously increasing labor force size, labor force participation rate, and level of human capital. The labor force participation rate is the ratio of the economically active population (including employed and unemployed) to the working-age population. Based on United Nations data, Belarus’ labor force participation rate has continuously increased since 1990, with a fluctuating decrease in the total population dependency ratio, and a continuously growing labor force size. The working-age population (aged 15–64 years) reached 6.348 million people in 2020, accounting for 67.2% of the total population, which is at a relatively high level compared to other Eastern European countries (World Bank, 2023). At the same time, in 2020, Belarus’ level of human capital was above average globally. The World Bank’s Human Capital Index (HCI) measures a

![Figure 6: Changes in the labor force participation rate of the working-age population aged 15–64 in Belarus, 1990–2019.](image)

*Data source: World Bank, World Development Indicators database.*
country’s ability to develop the quality of its national workforce through four indicators: education, health, skills and employment, and environmental foundations. Between 2010 and 2020, Belarus’ HCI value remained roughly at 0.7, which means that children born in Belarus in 2020 could achieve a productivity level of 70% if they receive complete education and sufficient health care, slightly lower than the average level of Europe and Central Asia but higher than the average level of middle-to-low-income countries such as Russia (0.68) and Ukraine (0.63) (World Bank, 2020).

From the above analysis, we can draw several conclusions about Belarus’ population transition and its social development status.

Firstly, Belarus is currently in the transitional period of population transition. Although it faces a continuous decline in fertility rates, an aging population causing an increase in death rates, and a decreasing natural growth rate, the country has formulated policies at the national level that have to some extent slowed down the rapid decline of its population during the population transition process. At the national level, Belarus has enacted policies (Совет Министеров Республики Беларусь, 2016), developed population planning, and proposed clear national population development goals, stating that “in the next 5–10 years, stable and increased fertility rates should be achieved, with a target of a comprehensive fertility rate of 1.75”. In addition, in terms of guiding reproductive culture, Belarusian President Lukashenko has repeatedly encouraged families to have three or more children in the media and raised Belarus’ population policy and population security to the level of national security strategy on a legal level, issuing family support policies, which have to some extent alleviated the crisis.

Secondly, population decline will be a long-term trend, as Belarus’ fertility rate is lower than the replacement level. Belarus’ net reproduction rate has been persistently below 1, which measures population reproduction and change from the perspective of intergenerational replacement. Since the 1950s, Belarus’ net reproduction rate has continuously declined after reaching its peak of 1.24 around 1960, falling below 1 after 1977, and currently standing at 0.72, indicating an intergenerational reduction in population reproduction. This means that Belarus’ population is not only decreasing annually but also shrinking between generations, and the population situation is severe.

Lastly, Belarus is still in the demographic dividend period that promotes economic growth, with a relatively low unemployment rate and high-quality human resources. In Belarus’ population and social transition, the country’s employment situation is good, giving it more policy options. Looking at the employment rate of the population aged 15 and above and the unemployment rate of the working-age population (aged 15–64 years), the labor market in Belarus was tight during 2000–2005, with a high number of unemployed people. According to available data, in 2003, the officially registered unemployment rate in Belarus reached as high as 136,100 people.
From 2006 to 2019, the officially registered unemployment population decreased from 52,000 people to 12,500 people in 2018, and then further declined. Currently, due to factors such as the pandemic and politics, Belarus’ unemployment rate for the labor force in 2020 was 4.7%, which is at an appropriate level compared to other Eastern European countries and Russia. The official registered unemployment population in 2021 was approximately 53,000 people (Национальный статистический комитет Республики Беларусь, 2022).

Therefore, the future trend of Belarus’ population and social development, particularly how to escape the “low fertility trap” of population development paths, depends on various factors such as the choices offered by Belarus’ population policy adjustments and reproductive social management reforms, the timing of implementation, and the extent to which policies are implemented.

3 Peculiarities of the Population Transition Process in Belarus

Stable population size and a reasonable population structure are necessary prerequisites for economic development, political stability, cultural prosperity, and national well-being. However, during its population transition, Belarus has experienced various events such as the collapse of the Soviet Union, geopolitical crises, and the COVID-19 pandemic. Its population growth lacks a stable socio-economic development environment and external factors. Internally, there is an imbalance among various elements of the population system, such as a death rate higher than the birth rate, an aging population, an imbalanced gender structure (with more females than males), and a lower male life expectancy per capita, which still exist even in the third phase of the transition. Compared with other European countries’ population transition, Belarus’ population transition process has both commonalities and certain peculiarities.

Over the past years, Belarus’ population has gradually shifted from positive growth to negative growth, and has faced a new problem of accelerated aging before the country’s economic level reaches that of developed countries. Drawing on the theory of population transition, Belarus’ population transition process was initially dominated by structural factors of the population, but with the rapid development of the economy and society, economic and cultural factors have gradually taken the lead. Belarus has unique features as an aging country, but its population aging is less severe compared to developed European countries. The changes in reproductive culture are not mainly caused by economic factors, and comprehensive population support policies have helped Belarus achieve population stability.
3.1 It Is Difficult to Change Attitudes Towards Fertility

Facing the population crisis in Belarus, a cautious view is that if it is possible to achieve a total fertility rate of around 2.1, it will effectively alleviate the population problem in Belarus, but this will be a slow and difficult process. The concept of one-child family planning, which has been inherited from the Soviet period to the present day, has been deeply rooted in Belarusian family culture. To change this concept, the government needs to make extensive efforts among the younger generation. Some scholars believe that, similar to other former Soviet republics such as Ukraine, the current low fertility rate and the culture of choosing to have fewer children in Belarus are the after-effects of the economic turmoil and political unrest in the 1990s, and since then have become deeply ingrained in the population structure due to long-term social and economic changes (Myrskylä, Goldstein, & Cheng, 2013).

There is evidence in European countries that the two-child family model contributes to fertility rates, which have seen some recovery. Therefore, some new theories have been proposed, suggesting that encouraging families to have 2 children can help improve fertility rates. However, these new theories are based on promoting gender equality, especially within the family (Myrskylä, Goldstein, & Cheng, 2013). Currently, like other countries in the region, women in Belarus still bear almost the entire burden of family life and childcare, and their ability to raise children has declined under the current economic situation. Evidence from Western European countries shows that incentive measures to promote fertility and family formation have had some effect, particularly in countries such as Sweden with strong support for gender equality policies, and in countries such as France where the ruling party and authorities have made long-term promises of support. However, sustained and intensive efforts are needed behind these policies to make pregnancy and child-rearing attractive to women and change men’s attitudes of detachment towards them.

However, it is important to note that while Belarus has made some progress in slowing down the declining trend of fertility rates by introducing support programs for families with multiple children, which encourage people to have or adopt three or more children, some studies such as the report “Policy responses to low fertility: How effective are they?”, released by the United Nations Population Fund on World Population Day 2021, have shown that according to actual country observations and research, cash or policy incentives over a certain period of time only bring forward the birth of children that families and populations already planned to have in the future during the current policy dividend period (Sobotka, Matysiak, & Brzozowska, 2020). From the perspective of lifelong fertility, the desire for low fertility has not changed. These measures do not actually increase families’ willingness to have
children. In this situation, changing the reproductive attitudes of families in society should be an important goal of population policy.

3.2 The Lack of a Stable External International Environment has an Impact on Population Development

The population development of Belarus lacks a stable external international environment. Belarus is located at the intersection of Western and Eastern Europe, as well as the Slavic Orthodox civilization, making its geographical location very important. It is a geopolitical crossroads between the EU and the CIS, especially with Russia, as well as a strategic gateway for Russia to reach Eastern and Western Europe, and a transportation hub that the Eurasian continental bridge must pass through. Its national security and regional geopolitical situation indirectly affect Belarus’ socio-economic and population development. In this situation, it cannot be denied that there are risks of ethnic conflicts, violent clashes, wars, and other factors that may impact the prospects of population development. The population and social development history of Ukraine provides an example of whether population can sustainably develop in such circumstances. Ukraine experienced a series of population development setbacks in the first half of the 20th century that were almost unparalleled in modern history, including the Russian-Japanese War (1904–1905), Cholera epidemics (1910), World War I (1914–1917), Bolshevik Revolution and Civil War (1917–1921), the Famine in Soviet Russia (1921–1923), the Great Famine Holodomor (1932–1933), excess mortality rates in Western Ukraine during the economic crisis period (1932–1936), the Great Terror (1937–1938), World War II (1939–1945), and the famine in the Soviet Union (1946–1947). The Ptoukha Institute for Demography and Social Studies at the National Academy of Sciences of Ukraine has compiled statistics on the impact of various events from 1904 to 2014 on the population loss in Ukraine, estimated the actual number of people affected by each event, and estimated the changes in population size over time. The results showed that the population size of Ukraine before its independence would have been 51 million and 87.2 million people without these destructive events (Romaniuk & Gladun, 2015). We can see a clear picture that external international environments or regional situations such as political, military, and social events have greatly impacted Ukraine’s population development. These events happened consecutively, leaving no time for Ukraine’s population to recover and sowed seeds of problems for the country’s population issues in the latter half of the 20th century and today.

Population development requires creating a stable and secure sustainable development environment. In the entire sustainable development system consisting of population, politics, society, and economy, it is impossible to discuss population
development without any other element. Currently, Belarus faces diplomatic risks, political and economic threats, and has not been able to make good independent economic and political progress in a geopolitical environment squeezed between Russia and the EU. Such factors are bound to cause social unrest and risks that will inevitably affect the long-term development of the population. Moreover, Belarus’ demographic transition is already in its later stages, but it is not too late for Belarus to create a stable environment to address its population issues, avoiding adverse effects on its economic and social development caused by its population structure.

3.3 Population Migration Is Mainly Domestic and No Large-Scale Population Outflow Has Occurred

At present, Belarus has not yet experienced a large-scale population outflow. In the historical process of demographic transition, different elements of the population play distinctly different roles in determining the development of the population. After entering the modern stage of demographic transition, both mortality and fertility rates have continued to remain stable at relatively low levels, thus their contribution to population growth has become relatively limited. Consequently, population migration naturally rose to become a key factor affecting the population situation, even becoming a decisive factor. Ukraine, another East Slavic country, experienced a significant population outflow during its encounter with population decline, economic recession, and other demographic and social problems. According to official estimates from the State Statistics Service of Ukraine, more than one million Ukrainians (net) left Ukraine between 2000 and 2020, mainly to work in Western countries or the Russian Federation (Державна служба статистики України, 2020). In contrast, Belarus has not experienced large-scale population outflow despite facing the same problems in the stage of demographic transition. Additionally, it has attracted a considerable number of immigrants from neighboring countries. To avoid future population outflows, political and economic considerations are necessary. For example, Poland achieved enormous economic success before reducing its net emigration to a controllable level. Politically, a stable and secure geopolitical environment is necessary. If the political situation stabilizes, the economy can achieve recovery and maintain some growth potential, and then the driving force for migration will weaken. In the future, Belarus may enter a period where population migration and mobility will begin and continue to be a decisive factor affecting its population trend as fertility rates remain low and stable.

Since the independence of Belarus, its population migration has mainly taken the form of internal migration. In terms of internal migration, the main direction of population migration is from rural to urban areas or from small towns to large cities.
This aspect has not only changed the population structure of urban and rural areas, increased the level of regional urbanization, but also caused a shortage of labor in rural and small town areas. As for international population migration, Belarus experienced a large-scale population outflow around 1950 before its independence, with a net migration rate as high as −10 ‰ between 1950 and 1955. After the disintegration of the Soviet Union and Belarus’ independence, the flow of people among the former Soviet republics turned into international migration. Due to its relatively stable political environment and ethnic harmony compared to other member states, Belarus attracted a considerable number of immigrants from other CIS countries. The net migration rate reached 1.1 ‰ between 1995 and 2000. Following the economic recession, Belarus experienced a net outflow of population between 2000 and 2022, although most years were still characterized by a net inflow of population. The incoming foreign immigrants mainly came from CIS countries and Baltic states. International migrants consisted mainly of young people who migrated for work and study purposes. The source countries included Russia, Ukraine, Poland, and Germany, among others (Национальный статистический комитет Республики Беларусь, 2020).

3.4 A Multi-Ethnic State With a Stable Composition of the Main Ethnic Groups

Belarus has significant multi-ethnic characteristics, with a large number of ethnic groups. During the process of demographic transition, the proportion of the main ethnic group remained stable. According to the results of the 2019 population census released by the National Statistical Committee of Belarus, there are more than 130 identifiable ethnic groups in Belarus, and the number increased to 140 in 2021. In addition, in the seven censuses conducted between 1959 and 2019, Belarusians have always been the main ethnic group in Belarus, accounting for over 80 % of the population. Their ethnic character is moderate and mild, and they possess a peaceful and positive drive, which is influenced by living in the small climate zone where various civilizations have mixed and blended throughout history. The Belarusian national character and culture have developed through interactions and interpenetration with brotherly nations of Russia, Ukraine, as well as Varangians, Baltic people, Poles, French, Germans, and many other ethnic groups while preserving its integrity and autonomy during this process of mutual influence and infiltration (Zhang, 2018). This stability contributes to the relative stability of ethnically diverse populations in Belarus.
3.5 The Future Population Will Be at Risk of Chronic Diseases

Belarus’ healthcare system is among the best in the CIS countries, but its population development faces a risk of rising chronic disease incidence. The health status of the Belarusian population has improved steadily as the overall social development level has risen, particularly in maternal and child health and reproductive health. For example, the under-five mortality rate has decreased significantly from 20‰ in 1990 to 4‰ in 2019, which is lower than Russia’s rate of 8‰. However, chronic non-communicable diseases have become the main risk factors for the health of the Belarusian population. From the perspective of the overall cause of death, chronic non-communicable diseases such as cardiovascular diseases are the leading causes of death in Belarus. Ischemic heart disease has been the leading cause of death in Belarus from 1991 to 2019, accounting for an increased percentage from 36.91% to 44.88%, with stroke being the second leading cause of death. It is worth noting that neurodegenerative diseases, mostly cognitive impairment, became the third leading cause of death in Belarus in 2019. During the demographic transition process in Belarus, population aging, cardiovascular diseases, tumors, neurological disorders and digestive system diseases will remain the main threats to the health of the Belarusian population (Institute for Health Metrics and Evaluation, 2020). This illustrates that Belarus is currently in an epidemiological transition phase, accompanying changes in disease and mortality patterns with dual impacts from infectious and non-infectious diseases, with unhealthy lifestyles still posing a severe risk of death to Belarusians, creating a dual burden on its healthcare system and population health.

4 Conclusions

Currently, the characteristics and challenges facing Belarus during its demographic transition are different from those of other Eastern European countries. Reduced income, employment difficulties, worsening population health issues, imbalanced sex ratios, among others, are the main problems and challenges that Belarus has faced since its independence in terms of population and development. These problems have been extremely unfavorable to Belarus’ economic and social development, while population aging and rising dependency ratios continue to exert pressure on its economic and social development. However, compared with neighboring countries, Belarus still has a relatively high population quality and a lower overall dependency ratio, and its human capital level is relatively good. It is still in the period of demographic dividend, which is favorable for further development of the national
economy. Solving the population issues in Belarus requires the scientific formulation of comprehensive plans to achieve population development under sustained social development. In terms of family support policies and fertility issues, further support to families should be provided, with the main goal being to form a widely accepted fertility culture and value system and encourage families to have more children. In addition, improving health conditions and reducing mortality requires promoting healthy lifestyles, improving residents’ living standards, improving hygiene and environmental conditions, and promoting positive behavioral and lifestyle changes among Belarusians.

Comparative analysis between demographic transition theory and the reality of Belarus’ population transition process can provide a new perspective for solving population issues in Belarus. Future research on population trends should focus on migration within the region and the impact of ethnicity, religion, and culture on population development. This will help to better understand the relationship between population transition, population and social development during the transition process, and conduct hierarchical analysis in policy research, providing sufficient scientific evidence to support conclusions.

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