

RESEARCH ARTICLE

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Migration Impact on the Labour Market and Economic Activity of Kazakhstan

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Abstract

This study examines the relationship between migration (M), economic activity (EA), and the labour market (LM) in the Republic of Kazakhstan from 2000 to 2022. The research comprises three stages, namely indicator selection, data analysis, and correlation-regression analysis. The study hypotheses propose that migration has a notably adverse influence on both the labor market and economic activity. Secondary data from the World Bank and the National Bureau of Statistics of the Republic of Kazakhstan were employed, covering the years 2000 to 2022. The chosen variables encompass migration growth, GDP, labor productivity, investment in fixed assets, real wages, and unemployment rates. The research includes three latent variables: migration (M), economic activity (EA), and the labor market (LM). The measurement models for these variables show acceptable to high reliability, suggesting a sufficient association between the included variables. Regression analysis reveals a significant negative impact of migration on both economic activity and the labour market. Migration can significantly influence economic activity, unemployment rate, and real wages. The findings support the hypotheses, indicating positive economic indicators and the country's socio-economic development trends. These results are valuable for understanding population dynamics and the potential impact of migration on the economy and social processes in Kazakhstan. Overall, the study provides insights into the relationships between migration, economic activity, and the labour market, highlighting the importance of these factors in shaping the country's development.

Keywords: Economy, Migration, Economic Activity, Labour Market, Gross Regional Product, Kazakhstan

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1. INTRODUCTION

Migration impacts demographic indicators, such as the size and structure of the population by age, profession and social status, which ultimately affects the labor market and economic activity. Migration has two aspects: the demand for labor and the supply of labor, and their effects may be different depending on the circumstances. On the labour demand side, migration can usually lead to changes in labour demand in different regions. If migrants come to a particular region in large numbers, the demand for labour can increase, especially in sectors that require low-skilled labour, such as agriculture, construction, or maintenance. This can lead to increased employment and higher wages. This situation may increase the rate of inflation.

On the labour supply side, migration flows also affect labour supply. The departure of migrants from a particular region may reduce the available labour potential in that region. As a result, there may be a labour shortage, especially in specific industries or professions. At the same time, regions that receive migrants may experience an increase in labour supply, affecting competition in the labour market and wages. As a result, inflationary pressures are easing.

Thus, no matter which of the effects of migration dominates, it ultimately affects the inflation rate. In addition, migrants can stimulate economic growth and activity in the regions they visit. They can fill vacancies and offer their services, contributing to the development of various sectors of the economy. Migrants can also stimulate consumption and create additional demand for goods and services.

Within monetary policy, central banks consider various internal and external factors when making decisions. Some of the main ones, of course, are the actual and expected dynamics of inflation, the trajectory of economic growth and the situation in the labour market in the country. Therefore, the question arises: How significant are the consequences of migration for such critical macroeconomic indicators as unemployment and wages in Kazakhstan?

In the domestic economic literature, the issues of the significance of migration effects on the economy in the country and separately for the regions still need to be studied more. Most scientific research is devoted to the dynamics and direction of migration flows in Kazakhstan and the reasons for the observed trends.

Migration flows can change in a small labor market. Introducing new visitors may lead to an increase in the labour supply in some areas, which may affect the employment rate of the local population. This may create competition in the labor market and labor costs for some categories of workers (Fairlie & Meyer, 2003; O'rourke & Sinnott, 2006; Akgündüz et al., 2015; Edo, 2015).

Most of the studies rely on the analysis of the distribution of shares of foreigners in different regions to determine the impact of migration on the labor market. Various methods are used, including modelling and econometric assessments, to understand better migration's impact on the labor market and its broader implications (Borjas, 2003; Brucker & Jahn, 2008; Alvarez & Royuela, 2022). Migration can have a particularly significant impact in the unskilled and low-paid sectors of the economy, where migrants are often involved in manual labor such as agriculture or construction. At the same time, in highly skilled industries, migrants can make a positive contribution by filling skills gaps and promoting innovation and productivity (Tan, 2012; Eckstein & Peri, 2018; Oesch & Piccitto, 2019).

Studies conducted in different countries do not provide a clear answer regarding the positive or negative impact of immigration on wages and employment. State policy and regulation of migration also play an essential role. This can significantly affect the availability of labor and employment conditions for migrants and the local population (Longhi et al., 2010; Helbling & Kalkum, 2018; Piyapromdee, 2020; Nweke & Enyosiobi, 2023).

However, in the domestic economic literature, questions about the significance of the impact of migration on the economy as a whole and on individual regions have yet to be sufficiently studied. Most of the research is devoted to analyzing the dynamics and direction of migration

flows in Kazakhstan and the reasons for these trends (Nyussupova & Sarsenova, 2012; Arbashiyeva & Spanov, 2022; Jussibaliyeva et al., 2023).

In most regions of Kazakhstan, interregional migration plays a significant role in the overall balance of migration, and researchers note an increase in the outflow zone of the population and a decrease in the inflow zone. Major cities such as Astana, Almaty, Shymkent and Atyrau are centres of attraction for migrants, while populations are declining in other regions. This study analyzes indicators for the entire country.

This study aims to empirically assess migration's impact on economic activity and the labor market in Kazakhstan as a whole. The study considers the impact of external and internal migration flows, including international and internal migrants. Illegal migrants are excluded due to a lack of statistical data.

2. LITERATURE REVIEW

There is a significant body of research, and the empirical literature on the topic provides mixed data on the impact of migration on wages and employment. Most studies rely on analysing the dispersion of the shares of foreigners by region to determine the impact of migration on the labor market. However, the findings of these studies differ. Research on this topic uses various methods, including modelling and econometric estimates, to better understand migration's impact on the labor market and its broader implications. In studies from different countries (Australia, Austria, Germany, UK, Netherlands, Norway, USA, France), no unequivocally positive or negative study of immigration on wages and employment was found. In the UK and the US, immigration has been found to have reduced pressure on wages in the distribution but marked a significant increase in wages at the top and bottom of the distribution (Alvarez & Royuela, 2022).

The impact of migrants on wages and employment is complex and causes economic debate. Some studies confirm that the influx of migrants can have a negative impact on the wages of some groups of the local population. They suggest that with a large number of available labor resources, migrants can compete with local workers and lead to lower wages (Edo, 2015). It is important to note that the impact of migrants on wages and employment can vary depending on factors such as the level of education of migrants, the reason for migration (refugees or migrants), the demand for labour in a particular region, government policies and regulation of migration (O'rourke & Sinnott, 2006; Akgündüz et al., 2015). This may be especially the case in unskilled and low-paid sectors of the economy, where they are often engaged in manual labour such as farming or construction. At the same time, in sectors that require high skills, migrants can make a positive contribution by filling the lack of specialists. They may have specialized skills that drive innovation and productivity. Moreover, migrants can contribute to economic growth and job creation, fill vacancies in sectors with a shortage of local workers, and help increase production and consumption (Tan, 2012; Eckstein & Peri, 2018; Oesch & Piccitto, 2019).

Another critical factor is the state policy and regulation of migration. Different countries adopt different approaches to control and manage migration flows. Introducing strict immigration policies can impact the availability of labour and employment conditions for migrants and the local population (Helbling & Kalkum, 2018; Nweke & Enyosiobi, 2023).

In developing countries, public policy on migration is based on various laws and regulations that govern the citizenship status and registration of migrants. In developed countries, public policy and regulation of migration is often associated with a balance between the needs of the labour market and the social integration of migrants. They seek to attract highly skilled professionals and investors and regulate the flow of low-skilled labour to maintain the sustainability and development of the economy.

Interest in the impact of migration on self-employed residents is due to several factors. First, self-employment, perhaps as the way out of poverty and promote the economic development of

ethnic groups. Second, it can influence tensions between ethnic groups and political influence. For instance, a study conducted in the US showed that self-employed migrants can crowd out self-employed locals and reduce their earnings. The possibility of immigrant clustering in specific market segments could lead to a more significant negative impact of immigration on wages and employment. This may limit the ability of local groups to use business ownership as a way of economic development. Self-employed immigrants are crowding out local self-employed workers. This can be explained by various factors, including market competition, immigrant preference, and changes in supply and demand for certain types of businesses (Fairlie & Meyer, 2003). Borjas (2003) proposes a different approach, using differences in the share of foreigners in groups with education and experience at the national level to determine the impact of migration on wages. Research also indicates that local and foreign workers are only partially substitutes for each other (Brucker & Jahn, 2008).

Migrants influence supply and demand and the local labor market from the moment they arrive, affecting the labour supply of similar skills and qualities. The impact on local and immigrant workers depends on the extent to which different types of work can substitute for each other in production and how firms change their composition and production methods in response to immigration (Cohen-Goldner & Paserman, 2011). Government spending on education and health care may also be affected. In the long run, migration shocks can lead to changes in the level and structure of firms' investments. Technologies and future migration patterns within and outside the country may also be affected. Therefore, long-term effects may differ significantly from short-term ones (Longhi et al., 2010; Piyapromdee, 2020). Immigration to the US and Europe raises concerns about lower wages and limited employment opportunities for the local population. In continental Europe, where the labor market is inflexible and unemployment is high and stable, fears of worsening unemployment due to immigration are prevalent. There is also concern about the financial burden on welfare states due to high unemployment among foreign labor (Brucker, 2011).

Brell (2020) divided migration flow into refugees and immigrants, in the study among developed countries. The results showed that refugees, even if they find work, usually receive lower wages than natives and other immigrants. The situation of refugees in relation to wages has been gradually improving over time, but in most countries not as fast as for other immigrants. Even in the long run, wages for refugees often lag far behind those of natives and other immigrants. Moreover, the results showed that refugees have low wages even when they have a job, and their wages gradually improve over time, but still remain significantly lower than those of natives and other immigrants. Problems of social inclusion and access to highly skilled jobs may be factors influencing this wage inequality.

Studies of domestic authors are mostly aimed at analyzing the dynamics of the migration process of labor resources in the regions of Kazakhstan (Nyussupova & Sarsenova, 2012) and especially under the conditions of the Eurasian Economic Union (Abdrasheva & Spanov, 2022). The results showed that in recent years a large flow of migrants has been observed in the East and South regions. Moreover, there was also observed a negative balance of migration which leads to demographic and economic problems. Jussibaliyeva et al. (2023) analyze the impact of urban infrastructure on youth migration to big cities. The results reveal a strong link between youth migration and education as well as healthcare. Education plays a key role in both domestic and international youth migration. The study highlights the need to develop higher education and increase employment to mitigate the loss of human resources.

In general, the impact of migration on the labour market is determined by various factors, including migrant characteristics, local housing and commodity prices, local labour market competitiveness, multiplier effects, spatial connectivity, capital accumulation, technological spillovers, and labour market institutions. The overall picture of the impact of migration on wages

and employment could be more precise and transparent. Research results vary depending on the methodology and data used. Some studies show that migration may slightly reduce local workers' wages while foreigners' wages decline more significantly. However, it should be noted that these studies may be contested.

3. METHODOLOGY

Determining the suitable methodology and choosing appropriate indicators play an essential role in research on the impact of migration on wages and employment. The wrong choice of methodology or inappropriate indicators can lead to distorted results and unreliable conclusions.

Therefore, careful planning and methodology development are integral to such research.

Conducting a literature review is also fundamental. It allows the study of existing research on this topic, identifies methodological approaches and indicators, and draws attention to conflicting results. This helps to avoid repeating mistakes and to build research based on existing knowledge. The study consists of three stages:

1. Selection of indicators.

Due to the lack of complete information, this provides an overview of trends and changes over time concerning migration, wages, and employment. This approach fills in data gap and provides an overall picture of the impact of migration on these indicators. Based on the studied literature and in accordance with the results of the regression analysis of a wide range of indicators characterizing migration flows and the economic development of the country, it was decided to use the following variables in the models (see Figure 1).

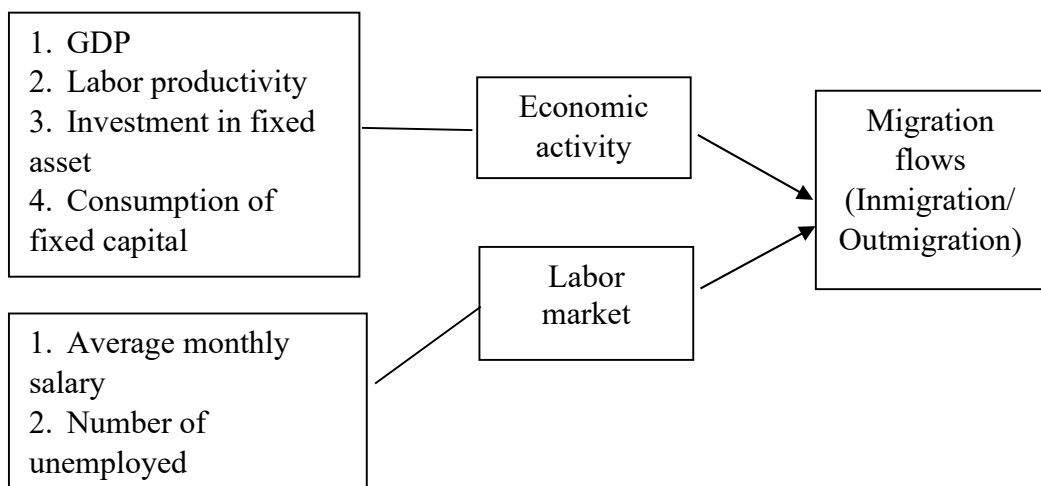


FIGURE 1. Model of the impact of indicators on migration

Note: compiled by authors

The model consists of a dependent indicator - migration, and independent indicators - economic activity and labor market. Economic activity will be measured by three indicators: GDP, labor productivity, investment in fixed capital and consumption of fixed capital. And the labor market will be assessed by the average monthly wage and the number of unemployed.

2. Analysis of the considered data. The data was collected from official data source: World Bank and the National Bureau of Statistics of the Republic of Kazakhstan for the period from

2000-2022. Given the limitations of the data, using secondary data from the last 10 years is a practical approach. This provides an overview of trends and changes over time in relation to migration, wages and employment. This study used data from the World Bank for the period from 2000 to 2022.

Based on the literature review the following variables were selected in the models: migration growth to assess migration flows, as well as indicators of economic activity, including GDP, GRP, labor productivity and investment in fixed assets. To analyze the labor market, data on real wages and unemployment rates were used.

3. Correlation-regression analysis. The method of checking the reliability and validity of data in social and marketing research (Cronbach's Alpha, Composite reliability and Average variance extraction) is used to analyze the results. Therefore, the study separately evaluates the results of each of these parameters for three measurement models: Migration (M), Economic activity (EA) and Labor market (LM). Next, there is conducted evaluation of two construction models, which represent the two hypotheses of current research.

The hypotheses of current research are:

Hypothesis 1: Migration has significantly negative impact on Labour market.

Hypothesis 2: Migration has significantly negative impact on Economic activity.

4. RESULTS AND DISCUSSION

Industrial policies of the Kazakhstan and EAEU countries

The industry is essential in the Eurasian Economic Union (EAEU) economies. The foundations of industrial policy in the EAEU countries are contained in several documents (long-term, medium-term, sectoral and intersectoral). Unlike national ones, the industrial policy within the Union is formed by the main areas of industrial cooperation. The EAEU industrial policy aims to collaborate and remove obstacles to creating a common market of industrial goods and services (Presnyakova, 2020). However, scientific, technological, and industrial cooperation and mutual trade remain low (Kasatkin et al., 2021; Kostyunina, 2021). The main stages and tools of its implementation are shown in Table 1.

TABLE 1. Labor market indicators from 2000 to 2022

Year	Number of unemployed, people	Year	Number of unemployed, people	Year	Average monthly salary, tenge	Year	Average monthly salary, tenge
2000	955,2	2011	473,12	2000	14374	2011	90028
2001	814	2012	474,81	2001	17303	2012	101263
2002	679,6	2013	469,61	2002	20323	2013	109141
2003	669,4	2014	460,44	2003	23128	2014	121021
2004	656	2015	447,7	2004	28329	2015	126021
2005	634	2016	445,1	2005	34060	2016	142898
2006	653	2017	439,7	2006	40790	2017	150827
2007	579	2018	441,13	2007	52479	2018	162673
2008	559,2	2019	442,05	2008	60805	2019	186815
2009	532	2020	441,8	2009	67333	2020	213003
2010	469,61	2021	450,55	2010	77611	2021	250311
		2022	458,87			2022	308250
		Growth	- 496			Growth	293 876

Note: compiled by authors based on the Bureau of National Statistics (2022)

Economic activity is a general concept that refers to all economic activities associated with producing, distributing and consuming goods and services in the economy. It includes various activities involving individuals and households, as well as enterprises and government organizations. It is important to note that economic activity is not limited to monetary transactions but also includes informal transactions and exchanging goods and services without money. However, in this study, economic activity will be assessed by four indicators described in the methodology. The dynamics of the consumption of fixed capital and labor productivity is given in Figure 2.

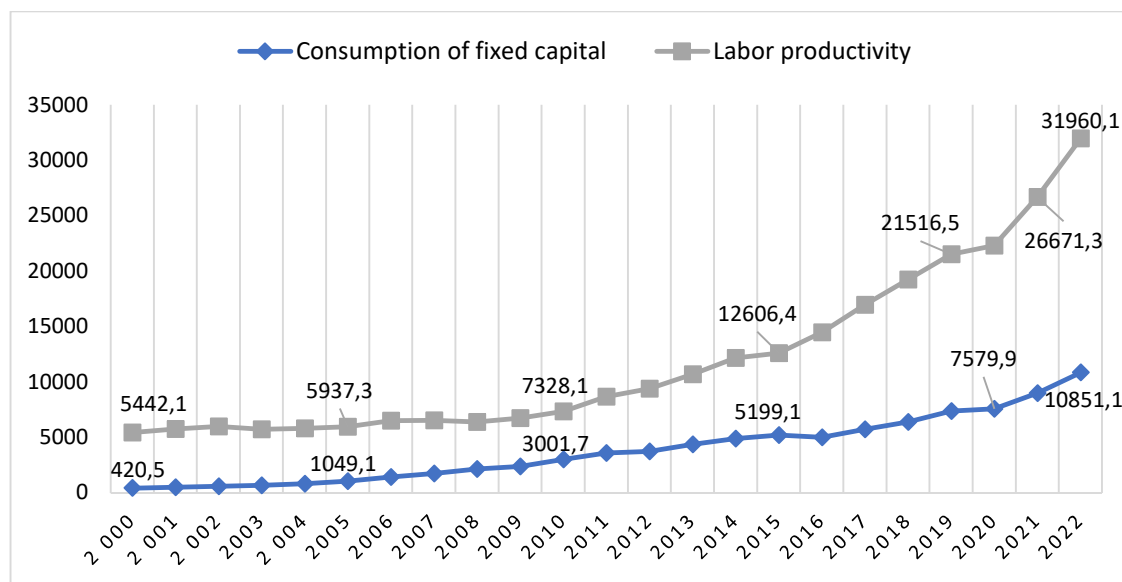


FIGURE 2. Indicators of consumption of fixed capital and labor productivity, 2000-2022, million tenge

Note: compiled by authors based on the Bureau of National Statistics (2022)

Consumption of fixed capital reflects the depreciation and ageing of the main capital assets used in the economy. The value of consumption of fixed capital increased by 25.8 times during the study period. This indicator increased from 420.5 million tenge to 10851.1 million tenge. This indicates increased depreciation and obsolescence of production assets in the economy.

Labour productivity shows how much output is produced per worker. Labour productivity has a positive trend. There is an increase from 2000 to 2022, and this indicator increased by 26,518 million tenge, which may indicate an increase in production efficiency and the introduction of new technologies and methods of work.

Investments in fixed capital - this indicator reflects the volume of investments in new production assets. The volume of investment in fixed assets is gradually increasing from 2000 to 2022, which indicates the desire of the economy to modernize and expand production. Next, in Figure 3 there is given dynamics of GDP indicators and investment in fixed assets.

GDP is the total amount of goods and services produced in an economy. The value of GDP is also growing from 2000 to 2022, which indicates an increase in the country's overall economic activity. Since 2000, the volume has increased by 100 trillion tenge. Growth peaks mainly occurred in the post-crisis years.

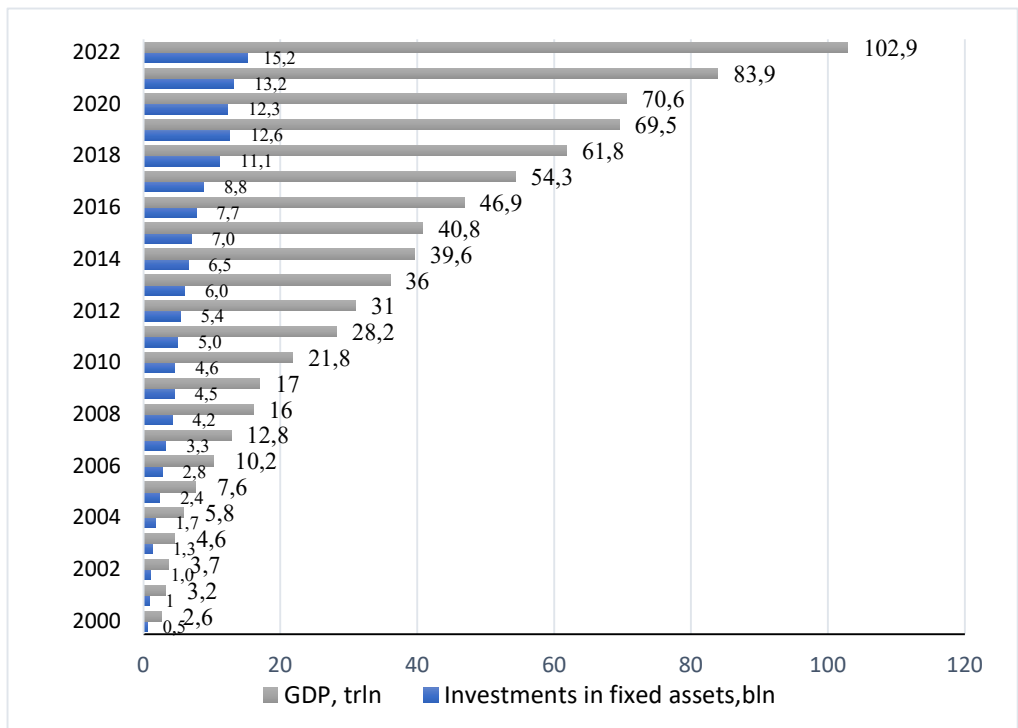


FIGURE 2. GDP indicators and investment in fixed assets from 2000 to 2022, tenge

Note: compiled by authors based on the Bureau of National Statistics (2022)

So, in 2010, GDP was almost 22 trillion tenge, and in 2011 it was already more than 28 trillion tenge. In 2015 - 40.8 trillion tenge, in 2016 - almost 47 trillion tenge (see Figure 3).

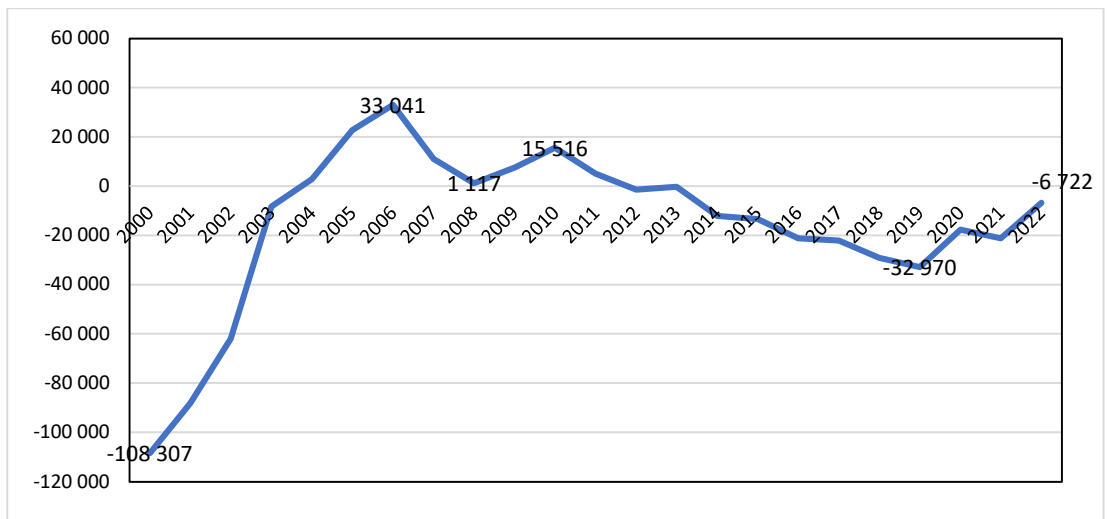


FIGURE 4. Migration growth in the Republic of Kazakhstan from 2000 to 2022, people

Note: compiled by authors based on the Bureau of National Statistics (2022)

The general trend of indicators indicates an increase in economic activity, investment activity and labour productivity during the study period. This may indicate a positive development of the country's economy. However, for complete data analysis, it is also necessary to consider other factors, such as inflation, unemployment, political stability, etc., to get a more accurate picture of the state of the economy.

The labour market has two key indicators: the unemployed population and the average monthly salary (see Table 1). The number of unemployed decreased from 2000 to 2002 but rose, especially from 2010 to 2013. After that, the unemployed population began to decline again. However, in recent years (from 2020 to 2022), there has been a slight increase in the number of unemployed. During the study period, the number of unemployed people decreased by 496 thousand, almost twice. The value of the average monthly wage is constantly growing. It increased from 14,374 tenge to 308,250 tenge, 21.4 times over the study period. This indicates an increase in the income of workers in the economy. The general trend of the data shows that the country's economy grew and developed over the period under study. The growth of real wages indicates an increase in the standard of living and well-being of the population, which, in turn, can help reduce unemployment.

Figure 4 presents data on the migration growth of the population in the Republic of Kazakhstan from 2000 to 2022. Migration growth shows the difference between the number of immigrants (coming into the country) and the number of emigrants (leaving the country). If the value of the migration gain is positive, more people arrive in the country than left, and the population increases. If the value is negative, more people leave the country than they arrived, and the population decreases.

From 2000 to 2002, there was a negative migration growth, meaning more people left the country than came. The population was declining. The highest positive indicator was in 2006, and amounted to 33,041 people. Then there was a decrease until 2008, but the indicator remained positive until 2011. Further, the migration growth was negative and decreased to -32,970 people in 2019. Moreover, since 2020, there has been an increase and decrease in migration growth.

The general trend in migration growth in Kazakhstan shows that in different periods the country attracted or lost migrants. However, in general, since 2005, the country has had a positive migration growth, contributing to the increase in the total population. These data can be important for understanding population dynamics and the potential impact of migration on the economy and social processes in the country.

As a result of data analysis, all economic indicators show a positive trend. Also, labour market indicators show a positive trend. The number of unemployed has fallen, and wages have risen. Migration growth in recent years also has a positive trend compared to the base year 2000. Next, a correlation regression analysis will be considered to determine the impact of economic activity and the labour market on migration growth using SmartPLC.

There are two hypothesis in this research. The study includes three latent variables: migration (M), economic acidity (EA) and labour market (LM). Therefore, the research includes three measurement models and two construction models. The first stage of the analysis includes measurement models validity testing.

The results for Cronbach's Alpha. Cronbach's Alpha result for the "M" model is 0.637. According to the established criteria, the value is higher than 0.6, which allows considering this model reliable. Although it may vary as being in an "acceptable" value between 0.6 and 0.8, the value is still within acceptable limits. Thus, it can be included that the reliability results of the "M" model are acceptable, suggesting a sufficient association between the included variables. The "EA" model has a high Cronbach's Alpha of 0.979. This indicates the high reliability of the data

in this model and the high degree of relationship between the variables. The "LM" model has an average Cronbach's Alpha value of 0.687. This indicates the average level of reliability of the data in this model.

In Table 2 there are provided results for measurement models' factors validity.

TABLE 2. Results for measurement models: "M", "EA", "LM"

Model	Cronbach's Alpha	Composite reliability	Average variance extraction	Result
M	0,637	0,840	0,726	Reliable
EA	0,979	0,984	0,940	Highly reliable
LM	0,687	0,860	0,755	Reliable
<i>Note:</i> complied by authors				

The results for Composite reliability. The "M" model has a good Composite reliability of 0.840. This confirms the high reliability of the data in this model. The "EA" model has a very high Composite reliability of 0.984. This confirms the excellent data reliability in this model. The "LM" model also has a high Composite reliability of 0.860, indicating high data reliability in this model.

The results for Average variance extraction. The Migration Model (M) has a mean Average variance extraction of 0.726. This suggests that the variables in this model only explain part of the total variance in the data. The "EA" model has a high Average variance extraction of 0.940. This confirms that the variables in this model account for a significant portion of the variance in the data. The "LM" model also has a high Average variance extraction of 0.755. This indicates the importance of the variables in this model in explaining the overall variance of the data.

The "M" model shows the highest data reliability and validity among all three models, indicating that it best fits the data and explains relationships between variables well. The "M" and "LM" models also have acceptable reliability and validity, but their results are slightly lower compared to the "EA" model.

The results for construction models are given in Figure 5.

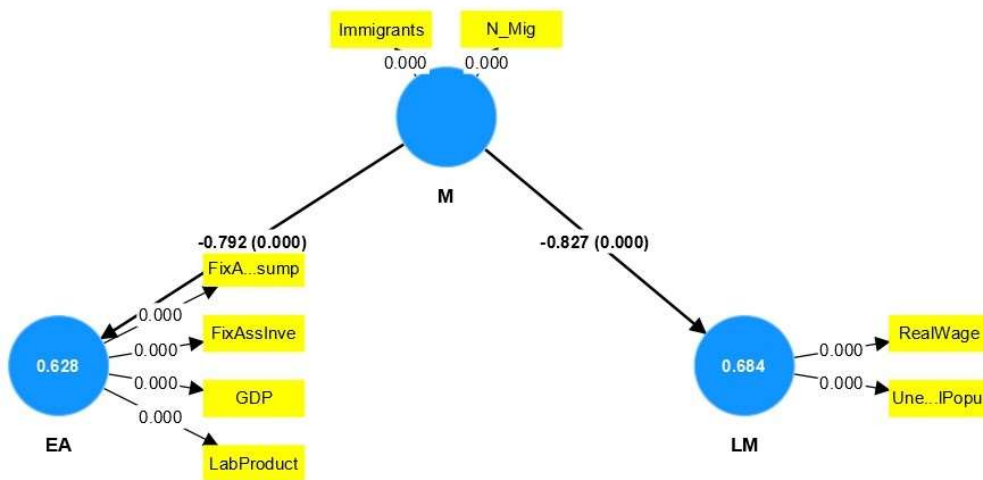


FIGURE 5. Construction models

Note: complied by authors

The overall results for the construction models show that there is significantly negative impact of migration flows on labour market and economic activity in Kazakhstan. The results support both hypotheses. Below, in Table 3, there is provided the summary for the results of the construction models, which represent the hypotheses for this research.

TABLE 3. Summary for construction models

Model	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values	R-square	Hypotheses
M -> EA	-0.792	-0.803	0.048	16.424	0.000	0.628	Supported
M -> LM	-0.827	-0.844	0.050	16.667	0.000	0.684	Supported

Note: complied by authors

Interpretation of the results for the "M -> EA" model. The results indicate a meaningful and statistically negative significant effect of Migration (M) on Economic Activity (EA) in the "M -> EA" model. R-square (coefficient of determination) shows how well the "M -> EA" model explains the variability of the dependent variable (Economic Activity - EA) based on the variance of the independent variable (Migration - M). The R-square value is 0.628, which means that about 62.8% of the variability in Economic Activity can be explained by the variance in Migration in this model. Thus, there is a clear link between Migration and Economic Activity, and Migration can significantly influence the level of Economic Activity in this context. P values represent the probability that the observed value of the coefficient (Original sample) could be obtained by chance, provided that the null hypothesis is true. The value of P values is 0.000, which means that the observed value of the coefficient is statistically significant.

Interpretation of the results of the "M -> LM" model.

R-square (coefficient of determination) shows how well the "M -> LM" model explains the variability of the dependent variable (Labor market - LM) based on the variance of the independent variable (Migration - M). The R-square value is 0.684, which means that about 68.4% of the Labor Market volatility can be explained by the Migration variance in this model. The value of P values is 0.000, which means that the observed value of the coefficient is statistically significant. The results indicate a meaningful and statistically negative significant impact of Migration (M) on the Labor Market (LM) in the "M -> LM" model. Thus, there is a clear link between Migration and the Labor Market, and Migration can significantly affect the unemployment rate and real wages.

Both hypotheses are supported.

Most previous studies have assessed the effects of migration to the labour market using spatial correlation, linking wage and employment variables to the share of immigrants in some geographic regions or industries. However, this approach has limitations and may give false results. Therefore, other methods have been used in recent years, including national-level analysis with differences in shares of immigrants by education and experience groups. In general, studying the impact of migration on the labour market requires considering various factors and characteristics of the labour market, such as market rigidity, country specificity, and the level of education and experience of immigrants (Brucker, 2011).

S. Weiske (2019) in his work determines the significance of the impact of immigration on the US economy. When assessing the dynamic responses of macroeconomic indicators to immigration shocks, the SVAR model is used. Within the model framework, the author distinguishes three types of shocks: immigration shocks, shocks of neutral and investment

technologies. To separate them most accurately from each other, long-term restrictions are introduced. According to the results obtained, immigration in the short-term harms total real wages and, at the same time, positively on investment. The impact on production and consumption is negligible. In general, immigration does not matter much to the US economy.

Summarizing the findings, the degree of influence of migration on the indicators of economic activity and the labour market varies depending on the country - the object of the study. Thus, in works on Western European countries (EU countries and Norway), estimates have shown that migration still has a specific effect on the indicators under consideration. At the same time, the results obtained in the study for the United States, on the contrary, indicate an insignificant impact of migration on the country's economy. Perhaps this is because the ratio of migrants to the permanent population in European countries in the analyzed periods was higher than in the United States.

For example, migration increased the resident population in Norway by 0.9–0.8% each year from 2010–2014. However, in the US, since 1950, this ratio has generally been below 0.4%. Generally, the assessment sequence used in the work corresponds to the methods used in the reviewed European Union, Norway and USA studies.

It should be noted that, according to most authors, the main problem in conducting empirical research on the impact of migration on macroeconomic indicators is the limited access to information on net migration, wages, the state of the labour market, and other variables that can be used in regression analysis.

5. CONCLUSIONS

In Kazakhstan, migrants can also be labour migrants, students, or refugees, but their numbers may be smaller due to differences in economic development and the size of the country. Government policies and migration regulations also exist but may need to be more developed and focused on managing labour migration and attracting investment.

This research aimed to empirically assess migration's impact on economic activity and the labour market in Kazakhstan. The study considered external and internal migration flows, including international and internal migrants, while excluding illegal migrants due to data limitations. Careful planning, suitable methodology, and indicator selection were essential to ensure the reliability of the research.

The analysis revealed positive trends in economic indicators, such as GDP, labour productivity, and investment in fixed assets, indicating a growing economy over the study period. The labour market also exhibited positive trends, with a decrease in the number of unemployed and a significant increase in real wages, indicating improvements in the standard of living.

The migration growth analysis showed that Kazakhstan experienced positive and negative migration flows, with an overall positive migration trend since 2005, contributing to an increase in the country's total population.

The correlation-regression analysis supported both research hypotheses, indicating that migration negatively impacts the labour market and economic activity. These results emphasize the importance of understanding migration's influence on wages and employment dynamics to inform policy decisions and address potential challenges.

Based on the findings, it is recommended that policymakers and stakeholders consider the implications of migration on the labour market and economic activity. Initiatives to support local workers and maintain economic growth while managing migration flows more effectively could lead to a balanced and sustainable development path for Kazakhstan. Further research and continuous monitoring of migration trends and their impact on the economy and labour market will be crucial for making informed policy decisions in the future.

A limitation to this study is that Kazakhstan does not keep records of illegal migrants. For further research, it is recommended to conduct an analysis of illegal migrants and conduct a qualitative study, since this issue has not yet been studied in the context of Kazakhstan.

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