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The collection of materials of the international scientific and practical conference "Kazakhstan - China: Digital Economy and" One Belt, One Road" – 2026" presents the results of the author's research conducted by the participants on topical and problematic issues. The publication is intended for students, undergraduates, doctoral students, as well as a wide range of readers dealing with topical issues of modern science.

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Implementation mechanisms:

1. Policy and institutional support: Governments should offer subsidies, tax incentives and legal frameworks for data security.

2. Enterprise strategy and agility: Align transformation goals with organizational change to break silos.

3. Ecosystem collaboration: Partner with universities, tech firms and supply chain stakeholders.

4. Talent development: Upskill workforces and adjust education curricula for digital competencies [3, 4].

Digital transformation offers significant opportunities for economic growth but requires coordinated action across policy, enterprise and education sectors. China-Kazakhstan cooperation under the Belt and Road Initiative can accelerate progress through shared best practices and technology transfer. Future research should focus on measuring transformation impact and scaling inclusive solutions.

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UDC (314)

THE IMPACT OF DEMOGRAPHIC STRUCTURE CHANGE ON RESIDENT INCOME IN CHINA

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Annotation. Demographic structure change provides an important perspective for understanding resident income growth and labour market adjustment. This paper examines the relationship between changes in the working-age population and resident income in China using annual data from 2000 to 2024. A multiple linear regression model is employed to assess the impact of demographic variables on per capita disposable income, controlling for economic structure, urbanisation and

technological factors. The results indicate a stable positive relationship between the working-age population and income levels. However, with the gradual decline of the demographic dividend, future income growth will increasingly depend on productivity improvements rather than labour supply expansion.

Key words: demographic structure; resident income; working-age population; China; economic growth.

Introduction

Demographic change provides a critical lens for understanding long-term economic growth and income dynamics. Since the reform and opening-up period, China's rapid economic development has been strongly supported by a large and expanding working-age population. The abundance of labour supply facilitated industrialisation, increased employment, and contributed significantly to rising resident income levels.

In recent years, however, demographic trends have shifted markedly. Declining birth rates, rising life expectancy, and population ageing have led to a reduction in the size of the working-age population. According to data from the National Bureau of Statistics, the population aged 15–64 decreased from 1.009 billion in 2016 to 962 million in 2023 [5]. This trend reflects not only a contraction in labour supply but also signals a transition away from the traditional growth model driven by demographic expansion [1].

Nevertheless, a decline in the working-age population does not necessarily lead to a reduction in income levels. During the study period, China's per capita disposable income continued to grow steadily, suggesting that income dynamics are influenced by multiple factors, including economic development, industrial upgrading, technological progress, and institutional changes in income distribution. Therefore, this study focuses on the working-age population as a key indicator of demographic change and examines its relationship with resident income.

This paper employs national annual data for China from 2000 to 2024. Changes in demographic structure are measured by the size of the working-age population (aged 15–64), while income levels are represented by per capita disposable income. A multiple linear regression model is applied, controlling for time trends, industrial structure, urbanisation, and technological innovation.

To analyse the relationship between demographic change and resident income, the following model is specified:

$$\ln Y_t = \beta_0 + \beta_1 \ln X_t + \gamma \text{Control}_t + \varepsilon_t \quad (1)$$

where Y_t denotes per capita disposable income, X_t represents the working-age population, Control_t includes time trend, tertiary-sector share, urbanisation rate, and R&D intensity, and ε_t is the error term. Logarithmic transformation is applied to reduce heteroscedasticity and enable elasticity interpretation.

To verify robustness, an alternative model is constructed:

$$\ln G_t = \alpha_0 + \alpha_1 \ln X_t + \delta \text{Control}_t + \varepsilon_t \quad (2)$$

where G_t denotes per capita GDP. This specification tests whether the results depend on the choice of dependent variable.

Table 1 – Baseline Regression Results

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Constant	-151.3158***	-26.4643***	-28.3199***	-27.9749***	-27.8251***
ln_x	14.0151***	3.0393***	3.1884***	3.1486***	3.1440***
Trend	—	0.0952***	0.0919***	0.0882***	0.0934***
Tertiary	—	—	0.4006	0.4959	0.4052
Urban	—	—	—	0.2196	0.1835
R&D	—	—	—	—	-5.5876
R^2	0.5241	0.9983	0.9984	0.9984	0.9984
Adj. R^2	0.5034	0.9982	0.9981	0.9981	0.9980
Observations	25	25	25	25	25

Note: ***, **, * indicate significance at 1%, 5%, and 10% levels.

Table 1 demonstrates that the coefficient of the working-age population variable (ln_x) is positive and statistically significant across all model specifications, indicating a stable positive relationship between demographic structure and resident income. Although the magnitude of the coefficient decreases after controlling for time trends, its significance and direction remain robust, suggesting that demographic factors continue to play an important role in income determination.

To further verify the reliability of the results, robustness tests are conducted by replacing the dependent variable with per capita GDP and using the share of the working-age population as an alternative explanatory variable.

Table 2 – Robustness Test Results

Variable	Test 1: Per Capita GDP	Test 2: Population Share
Constant	-31.2577***	3.9897***
ln_x	3.5487***	—
x_share	—	0.0518***
Trend	0.0942***	0.0962***
Tertiary	-1.1503***	1.0011**
Urban	0.6497	0.5185
R^2	0.9987	0.9972
Adj. R^2	0.9984	0.9967
Observations	25	25

Note: ***, **, * indicate significance at 1%, 5%, and 10% levels.

The robustness results confirm that the working-age population remains positively associated with economic performance. However, given the limited sample size and the absence of unit root and cointegration tests, the findings should be interpreted as indicative of statistical relationships rather than strict causal effects.

Conclusion

This study shows that demographic structure remains an important determinant of resident income growth in China. The working-age population continues to have a significant positive impact on income levels, even after controlling for structural and technological factors. However, as the demographic dividend gradually weakens, China must transition toward a productivity-driven growth model.

Policy implications include increasing labour force participation, especially among underrepresented groups, enhancing labour productivity through education and technological innovation, and improving income distribution and social security systems. These measures are essential to mitigate the economic impact of demographic ageing and sustain long-term income growth.

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CYBER RISK MANAGEMENT IN THE CONTEXT OF DIGITALIZATION OF BANKING

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Annotation. The digitalization of banking has improved service efficiency and customer interaction, but it has also increased banks' exposure to cyber risks. This paper examines the main categories of cyber risks in digital banking and reviews international approaches to cyber risk management. The study is based on literature review, comparative analysis, and regulatory materials. The findings show that cyber risk management in banking should be viewed not only as a technical task, but also as a governance, compliance, and resilience issue.