ISSN 2616-5902 Vol. 7, Issue 5: 64-71, DOI: 10.25236/AJBM.2025.070508

The Impact of New Quality Productivity on Industrial Economic Development—Empirical Analysis Based on Provincial Panel Data

Liu Minjie

School of Economics and Management, Chongqing Normal University, Chongqing, China

Abstract: *Based on the panel data of 30 provinces in China from 2013 to 2023, this paper uses the fixed effect model to verify the direct mechanism of new qualitative productivity on China's industrial economic growth. The results indicate that: (1) New quality productivity is the main driving force for promoting industrial economic development, and further robustness tests are conducted by replacing core explanatory variables; (2) Selecting the agglomeration of R&D funding factors as its intermediary role in this process, and using an intermediary effect model to test the intermediary mechanism of funding factor agglomeration; (3) Through heterogeneity testing, it was found that there are regional differences in the impact of new quality productivity on industrial economic growth. The eastern and central regions have significant positive promoting effects, while the western region has no significant impact; Based on the research results mentioned in the article, relevant policy recommendations have been proposed, including increasing investment in scientific and technological innovation, strengthening talent cultivation and introduction, developing new quality productive forces according to local conditions, and alleviating regional development imbalances.*

Keywords: *New Quality Productivity; Industrial Economy; Fixed Effects Model; Aggregation of Financial Factors; Mediation Effect*

1. Introduction

With the beginning of a new wave of global technological revolution, new innovative technologies led by artificial intelligence are beginning to develop comprehensively, and these new technologies are gradually being introduced into traditional industrial manufacturing, comprehensively driving the digital and intelligent transformation of traditional industries. China has begun to follow and lead the wave of technological revolution, focusing on the development of technology and innovative enterprises. The Third Plenary Session of the 20th Central Committee of the Communist Party of China clearly proposed to "lead the construction of a modern industrial system with technological innovation", emphasizing the significant role of cultivating new quality productivity in building a new development pattern, and creating new value and development opportunities through the combination of new quality productivity and traditional industry. Combining emerging technologies to promote the transformation and upgrading of traditional industrial economy has become the core task of China's modernization construction. Technological innovation and high-quality development are the key connotations of new quality productivity, including cutting-edge fields such as artificial intelligence, big data, the Internet of Things, and green technology, providing comprehensive technology for the upgrading of traditional industries and paving a new path for the development of industrial economy. New quality productivity relies on technological innovation and optimized allocation of factors to digitize and informatize production processes, improve production efficiency, and ultimately enhance the competitiveness of enterprises. In this process, traditional manufacturing industries have begun to transform towards digitalization and vigorously enhance intelligent technology, promoting the rapid rise of emerging technology industries. On the one hand, the new quality productivity is of great significance for optimizing the industrial structure, promoting the development of industrial manufacturing towards high-end, intelligent, and green directions, increasing high-quality and high value-added industrial industries, and thereby promoting the high-speed and high-quality development of the industrial economy; On the other hand, it can help various enterprises reduce labor and material loss costs in production, improve the efficiency of work and production processes, enhance the competitiveness of enterprises, and thus enhance the resilience and vitality of the entire industrial economy. To explore the role of new quality productivity in the high-quality development of industrial economy, this article first constructs an evaluation index system for new quality productivity, and uses entropy weight method for scientific calculation to verify

ISSN 2616-5902 Vol. 7, Issue 5: 64-71, DOI: 10.25236/AJBM.2025.070508

the impact of new quality productivity on industrial economic growth in various provinces and regions of China. Is there significant heterogeneity among regions? And verified the mediating effect of R&D funding factors clustering in new quality productivity on industrial economic growth. Through the above research and investigation, it is of practical significance to clarify the current level of development of new quality productivity in various regions, formulate the general direction of industrial industry development, and further promote the high-quality development of industrial economy.

2. Journals reviewed

In the context of a new round of industrial revolution and industrial transformation, the effectiveness of traditional productivity is declining, and the efficiency of factor combinations is decreasing. Developing new quality productivity is a requirement for transforming the development mode and promoting high-quality development, demonstrating strong driving force and support for leading the industrial revolution[1]. The proposal of new quality productivity has attracted great attention from the academic community, and related research mainly includes the following three aspects. One is the connotation and characteristics. Its connotation characteristics are technological innovation, emerging and future industries, and high-quality development[2]. The second is theoretical logic. The evolution and upgrading of new quality productivity emphasizes the shift towards a new development paradigm. Liu Xuexin et al. elaborated on the theoretical construction of new quality productivity from three dimensions: micro carrier, meso governance, and macro development[3]. The third is the practical path. New quality productivity has distinct goal orientation and functional positioning[4]. At the national level, we will comprehensively promote industrial innovation and technological revolution, improve the talent training system, and lay out emerging and future industries.

With the proposal of new quality productivity, research has begun on constructing a scientific and reasonable measurement index system for it. Constructing an indicator system that accurately reflects the level and characteristics of new quality productivity is a key step in further research on new quality productivity. Wang Ke et al. constructed an evaluation index system based on Marxist political economy theory, starting from the three elements of laborers, labor materials, and labor objects, to measure and analyze the level of new quality productivity at the provincial and municipal levels in China[5]. Lujiang[6]believe that new quality productivity needs to cover three major aspects: technology, green and digital, and have constructed a comprehensive evaluation system for new quality productivity based on these three primary indicators.

With the continuous updating and development of technology, new quality productivity makes industrial production processes more efficient and intelligent, greatly improving production efficiency and product quality, and bringing higher competitiveness to industrial enterprises[7]. The new quality productivity promotes the high-quality development of the manufacturing industry, and the development of new technology and high-quality industries will drive the improvement of the efficiency of the entire national industrial system, and continue to benefit the development of the national economy, thus laying a solid material foundation for high-quality economic development[8]. In addition, empirical evidence shows that new quality productivity can directly or indirectly promote the transformation and upgrading of the manufacturing industry from the perspective of the digital economy[9].

In summary, there are currently few empirical studies on the relationship between new quality productivity and regional industrial economic development. This article first analyzes the direct mechanism by which new quality productivity empowers regional industrial economic development and proposes research hypotheses; Subsequently, a panel regression model was constructed to examine the direct impact of new quality productivity on regional industrial economic development and regional heterogeneity; Finally, provide decision-making references and suggestions for formulating scientific policies for the development of regional industrial economy.

3. Research design

3.1 Mechanism analysis and research hypotheses

New quality productivity takes technological innovation as its core and empowers the industrial economy from multiple dimensions. Manufacturing is an important carrier of technological innovation, and the research and application of new technologies are usually first realized in industrial industries, promoting the composition of industrial and supply chains. Technologies such as artificial intelligence and new energy are commonly applied in emerging technology industries[10-11]. New quality

ISSN 2616-5902 Vol. 7, Issue 5: 64-71, DOI: 10.25236/AJBM.2025.070508

productivity can not only assist in the digital transformation of traditional industries, improve production efficiency and product quality, enhance market competitiveness, but also reduce the cost of innovation factors in various fields, improve innovation efficiency, and drive the coordinated development of the upstream and downstream industrial chains of related industries, promoting the optimization and development of resources in the industrial field[8]. At the same time, the new quality productivity drives enterprises to explore new markets at home and abroad with innovative products, ultimately promoting steady growth of industrial economy in various regions in all aspects. Based on the above analysis, hypotheses are proposed:

H1: The improvement of new quality productivity can effectively promote industrial economic growth.

China has a vast territory, and there are differences in resource endowment, industrial foundation, population, and talent quality among different regions. The inherent differences in factor endowments between regions directly lead to significant differences in the level of new quality productivity between regions[12]. Therefore, it can be inferred that there may be heterogeneity in the impact of new quality productivity on industrial economy in different regions.

H2: The impact of new quality productivity on industrial economy varies in different regions.

The new quality productivity plays an intermediary role in the agglomeration of financial factors in the growth of China's industrial economy. Due to the high return expectations of high-tech industries, new quality productivity attracts a large amount of diversified funds such as venture capital and government funds[13]. With the development of new quality productivity, digital platforms can reduce information asymmetry, improve the transparency of research and development projects, further enhance the credibility of cooperation, and promote the aggregation of financial factors. With the aggregation of financial factors, it can further attract high-end talents and complementary supporting services, improve research and development efficiency, and further promote the innovation capability and market competitiveness of enterprises. The development of new quality productivity has promoted the development of high-quality and high value-added industries, greatly improving the innovation and accumulation of science and technology. With the development and innovation of high-tech, the demand for research and development funds will greatly increase, and due to the attraction of high profits in high value-added industries, the aggregation of high-quality research and development funding elements will continue to be promoted, thereby promoting the growth of high-quality industrial economy.

H3: New quality productivity can have a positive impact on the industrial economy by promoting the agglomeration of financial factors.

3.2 Variable selection and explanation

3.2.1 Explained variable

The dependent variable of this article is Regional Gross Domestic Product (RGIP). Use the industrial production value of each region as the index of regional industrial development level.

3.2.2 Explanatory variables

This article chooses New Quality Productivity (NQP) as the core explanatory variable. Regarding the measurement indicators of new quality productivity, referring to existing research[6], three primary indicators of innovation, resource conservation and friendliness, and industrial digital productivity were constructed from the dimensions of technology, green and digital productivity as the evaluation index system. The average weight of each variable and the comprehensive score of the development level of new quality productivity were calculated using the entropy method (see Table 1).

3.2.3 Control variables

Industrial structure upgrading (UI), measured by the proportion of the tertiary industry; Open level (ol), using the proportion of total import and export volume to GDP as an indicator; Educational attainment (CDA) is measured by the number of individuals with a college degree or above; Local government intervention (LGI) is measured by the ratio of local fiscal expenditure to GDP; Foreign trade investment (fi) is measured by the total amount of foreign investment.

3.2.4 Mediating variables

Agglomeration of Financial Factors (RD). This article refers to Chen Xiaoping[14] and Zhang Yiting[15], and uses the level of R&D funding factor aggregation to reflect it, and measures it using

ISSN 2616-5902 Vol. 7, Issue 5: 64-71, DOI: 10.25236/AJBM.2025.070508

science and technology expenditure in local fiscal expenditure.

Table 1 Evaluation Index System for New Quality Productivity

Dimension layer	First level indicator	Secondary indicators	attribute	unit	weight
science and technology	Innovative productivity	Number of innovative research and development patents	straight	individual	0.123
		Revenue from innovative research and development business	straight	RMB100mn	0.139
		Number of technical R&D personnel	straight	ten thousand people	0.122
		technical production	straight	tower	0.134
green	Resource conservation and friendly productivity	Energy intensity	burden	Ton of standard coal/10000 yuan	0.010
		Water intensity	burden	Cubic meter/10000 yuan	0.007
		salvage value	straight	%	0.014
		exhaust emission	burden	Ton/10000 yuan	0.003
digit	Industrial digital productivity	Telecommunications business communication	straight	RMB100mn	0.109
		Internet penetration rate	straight	Ten thousand	0.049
		Software service fee	straight	RMB100mn	0.167
		e-commerce	straight	RMB100mn	0.123

3.3 Model Settings

3.3.1 Fixed effects model

Construct a fixed effects model with New Quality Productivity (NQP) as the core explanatory variable and Regional Gross Domestic Product (RGIP) as the dependent variable:

$$\mathrm{RGIP}_{i,t} = \alpha_0 + \alpha_1 \mathrm{NQP}_{i,t} + \alpha_n \mathrm{Col}_{i,t} + \mu_i + \xi_t + \varepsilon_{i,t} \tag{1}$$

Among them, $\mathrm{RGIPi}_{,t}$ is the level of industrial economic development in province i during period t, $_{\mathrm{NQPi}}$, t is the level of new quality productivity in province i during period t, and $_{\mathrm{Coli},t}$ is the control variable. α_i is the coefficient to be estimated, where μ_i, ξ_t, and ε_i represent individual and time fixed effects, as well as random error terms, respectively.

3.3.2 Mediation effect model

To investigate the mediating effect of R&D capital agglomeration on industrial economic growth through new quality productivity, the following mediation effect testing model is constructed:

$$\mathrm{M}_{i,t} = \beta_0 + \beta_1 \mathrm{NQP}_{i,t} + \beta_n \mathrm{Col}_{i,t} + \mu_i + \xi_t + \varepsilon_{i,t} \tag{2}$$

$$\mathrm{RGIP}_{i,t} = \gamma_0 + \gamma\alpha_1 \mathrm{NQP}_{i,t} + \gamma_2 \mathrm{M}_{i,t} + \gamma\alpha_n \mathrm{Col}_{i,t} + \mu_i + \xi_t + \varepsilon_{i,t} \tag{3}$$

Among them, Mi and t are the mediating variables of R&D capital agglomeration.

Table 2: Descriptive statistics of related variables

variable	symbol	sample size	mean value	standard deviation	minimum value	Maximum value
Regional Gross Industrial Product	rgip	330	1.063	0.952	0.048	4.924
New Quality Productivity	nqp	330	0.122	0.127	0.013	0.839
Upgrade of industrial structure	uis	330	49.896	9.139	32	84.8
degree of education	cda	330	6.135	5.488	0.444	70.991
Local government intervention	lgi	330	0.2	0.081	0.083	0.525
Foreign trade investment	fi	330	1.286	7.011	0.056	94.335
Open level	ol	330	0.283	0.292	0.008	1.583

3.4 Data sources

This article uses inter provincial panel data from the National Tai'an Database (CSMAR) from 2013 to 2023 as the research sample. The final data used were 30 provinces (autonomous regions, municipalities directly under the Central Government), and some missing values were supplemented by linear interpolation and mean value methods. The metrological testing operations were completed in

ISSN 2616-5902 Vol. 7, Issue 5: 64-71, DOI: 10.25236/AJBM.2025.070508

Stata17.0, and the descriptive statistical results of the main variables are shown in Table 2.

From Table 2, it can be seen that the minimum and maximum industrial production values of the dependent variable regions are 0.048 and 4.924, respectively, indicating significant differences in the level of industrial economic development among provinces. The minimum and maximum values of new quality productivity are 0.013 and 0.839, respectively, indicating significant regional differences and uneven development.

3.5 Descriptive statistics and correlation analysis

Table 3 Correlation Analysis of Various Variables

Variables	(1)rgip	(2) nqp	(3) uis	(4) cda	(5) lgi	(6) fi	(7) ol	VIF
(1) rgip	1.000							
(2) nqp	0.873*	1.000						0.44
(3) uis	-0.009	0.349*	1.000					0.52
(4) cda	0.632*	0.640*	0.182*	1.000				0.55
(5) lgi	-0.656*	-0.524*	-0.072	-0.483*	1.000			0.60
(6) fi	-0.093	-0.032	0.171*	-0.063	0.047	1.000		0.96
(7) ol	0.336*	0.532*	0.641*	0.295*	-0.404*	0.049	1.000	0.42

*** p<0.01, ** p<0.05, * p<0.1

Due to the unknown existence of strong correlation between variables, this article conducted correlation analysis on the variables and preliminarily identified and evaluated the collinearity among them. The inspection results are shown in Table 3:

From Table 3, it can be seen that each variable does not exceed 0.8, and there is no multicollinearity among the variables involved. In addition, it can be seen that the variance inflation factor (VIF) is less than 10, and there is no collinearity among the variables.

4. Empirical Analysis of the Impact of New Quality Productivity on Industrial Economic Growth

4.1 Benchmark regression analysis

Table 4 Regression Results of Benchmark Model

	(1)	(2)
	rgip	rgip
nqp		4.041***(5.50)
uis	0.00819 (1.14)	-0.0100* (-2.42)
cda	0.0181(1.03)	0.00261 (0.49)
lgi	-3.307** (-3.47)	-1.730**(-2.82)
fi	-0.000979(-1.19)	-0.000259(-0.58)
ol	-0.850(-1.57)	0.190 (1.11)
cons	1.444***(4.92)	1.346***(6.52)
t	yes	yes
id	yes	yes
N	330	330
r2	0.300	0.666

***p<0.01, **p<0.05, *p<0.10
* p<0.05, ** p<0.01, *** p<0.001

In order to examine the impact of new quality productivity on industrial economy, a benchmark regression was conducted, as shown in Table 4. The results indicate that the regression coefficient of new quality productivity is significantly positive, passing the 1% significance test, that is, new quality productivity promotes industrial economic growth, thus verifying H1. The upgrading of industrial structure, cultural level, local government intervention, foreign investment, and level of openness all passed the 1% significance test, indicating that the above control variables contribute to promoting industrial economic growth.

4.2 Heterogeneity analysis

China has a vast territory, with significant differences in resource endowments and economic development foundations among different regions. Regression analysis at the overall level alone is difficult to examine and measure regional heterogeneity characteristics. This article accurately characterizes the heterogeneous effects of new quality productivity on industrial economic growth by dividing provinces into eastern, central, and western regions, and then regressing each region separately

ISSN 2616-5902 Vol. 7, Issue 5: 64-71, DOI: 10.25236/AJBM.2025.070508

(Table 5).

Table 5 Heterogeneity Analysis

	(Middle)	(East)	(West)
	rgip	rgip	rgip
nqp	5.483***(6.20)	4.273***(5.32)	1.375(1.42)
uis	-0.0178*(-2.71)	-0.0237(-2.05)	-0.0101(-1.75)
cda	0.0324(1.45)	-0.000304(-0.09)	0.0629***(7.71)
lgi	-0.789(-2.18)	-0.603(-0.22)	-0.606(-1.81)
fi	-0.168*(-3.23)	0.00146(0.89)	-0.0362(-1.27)
ol	-0.596(-0.73)	0.0805(0.34)	-0.528* (-3.02)
_cons	1.425***(6.38)	2.090**(3.68)	0.935**(3.47)
t	yes	yes	yes
id	yes	yes	yes
N	88	121	121
r2	0.578	0.694	0.755

***p<0.01, **p<0.05, *p<0.10
* p<0.05, ** p<0.01, *** p<0.001

From Table 5, it can be seen that overall, the eastern and central regions are significantly positive, and although the coefficient in the western region is positive, it did not pass the significance test. The promotion effect of new quality productivity on industrial economic growth is more significant in the eastern and central regions, possibly due to their relatively strong economic foundation and market potential. The development of major industries is mostly technology intensive manufacturing, with a solid industrial foundation and a relatively complete existing industrial system, which can quickly adapt to the transformation of new quality productivity into real productivity, thereby promoting regional industrial economic growth. Due to restrictions such as being far from the sea, the transportation costs of manufacturing in the western region are relatively high, and the industrial economic foundation is relatively weak. The industrial system is mostly focused on energy extraction and utilization, making structural transformation difficult and the development of high-end manufacturing slow. Therefore, new quality productivity has not played a significant role in promoting industrial economic growth, thus verifying hypothesis H2.

4.3 Robust Test

In this section, this article conducts robustness testing by replacing the core explanatory variables to further verify reliability. The robustness analysis adopts the calculation method of replacing the core explanatory variables. Replace the regional industrial production value with the number of large and medium-sized industrial enterprises as a variable and perform regression again. As shown in table 6, the regression results show that the new quality productivity is still significantly positive.

Table 6 Regression Results of Robustness Analysis

	(1)	(2)
	lmie	lmie
uis	-0.0442**(-3.46)	-0.0205*(-2.20)
cda	-0.0267(-1.09)	-0.00646(-0.66)
lgi	1.797(1.25)	-0.257(-0.26)
fi	0.00359*(2.19)	0.00265*(2.13)
ol	0.631(0.88)	-0.723*(-2.21)
nqp		-5.262***(-5.95)
cons	3.658***(6.33)	3.785***(8.44)
t	yes	yes
id	yes	yes
N	330	330
r2	0.339	0.537

***p<0.01, **p<0.05, *p<0.10
* p<0.05, ** p<0.01, *** p<0.001

4.4 Intermediary effect test

In order to deeply analyze and understand the specific mechanism of the role of new quality productivity in industrial economic growth, this article takes "new quality productivity - R&D investment agglomeration - industrial economy" as the transmission mechanism, and uses a three-step regression method[16] to verify the impact of nature productivity on industrial economic growth, the impact of new quality productivity on R&D funding factor agglomeration, and whether R&D funding factor agglomeration has a promoting effect on industrial economic growth. The regression results are shown

ISSN 2616-5902 Vol. 7, Issue 5: 64-71, DOI: 10.25236/AJBM.2025.070508

in Table 7.

Table 7 Regression Results of New Quality Productivity, R&D Capital Factor Agglomeration, and Industrial Economy

	(1)	(2)	(3)
	rgip	rd	rgip
nqp	4.041***(5.50)	84.91***(8.42)	2.828***(4.23)
rd			0.00974*(2.60)
uis	-0.0100*(-2.42)	0.249(1.71)	-0.0115**(-2.86)
cda	0.00261(0.49)	0.0320(0.41)	0.00205(0.40)
lgi	-1.730**(-2.82)	10.72(0.57)	-1.670*(-2.75)
fi	-0.000259(-0.58)	0.0260(1.33)	-0.000488(-1.19)
ol	0.190(1.11)	-0.343(-0.04)	0.175(1.10)
_cons	1.346***(6.52)	-18.80*(-2.40)	1.401***(7.69)
t	yes	yes	yes
id	yes	yes	yes
N	330	330	330
r2	0.666	0.732	0.698

***p<0.01, **p<0.05, *p<0.10
* p<0.05, ** p<0.01, *** p<0.001

As shown in Table 7, the results of column (2) indicate that the new quality productivity passed the 1% statistical significance test, which suggests that the new quality productivity has a positive promoting effect on the mediating variable of R&D funding factor aggregation. Moreover, for every 1 unit increase in the level of new quality productivity, the corresponding increase in R&D funding factor aggregation is 84.91 units. The results of column (3) show that the mediating variable of R&D capital agglomeration passes the 10% significance test, and the core explanatory variable remains significantly positive at the 1% level. The results indicate that R&D capital agglomeration plays a mediating role in the impact of new quality productivity on industrial economic growth, thus verifying hypothesis 3.

5. Conclusions and recommendations

This article is based on panel data from various provinces in China from 2013 to 2023, and analyzes the mechanism of the impact of new quality productivity on China's industrial economic growth. The entropy weight method is used to construct a comprehensive evaluation system for new quality productivity, and an empirical analysis model is used to test the impact of new quality productivity on industrial economic growth. Research has found that: (1) The benchmark regression results indicate that new quality productivity has a significant promoting effect on industrial economic growth, and the robustness test is still significant. (2) Heterogeneity analysis found that there are differences in the level of development of new quality productivity and its impact on industrial economic growth among provinces in different regions, with significant effects in the eastern and central regions. (3) The mediation effect model was used to examine the mediating effect of R&D funding factor agglomeration on the impact of new quality productivity on industrial economic growth.

Based on the above research conclusions, in order to better leverage the driving role of new quality productivity in industrial economic growth, this article proposes the following policy recommendations:

Firstly, increase investment in scientific and technological innovation research and development. By establishing a new quality productivity research and development fund, the focus of support will be on tackling key core technologies in the industrial field, such as the practical application of artificial intelligence in industrial manufacturing and the research and development of new energy technologies. At the same time, tax incentives will be implemented for research and development enterprises and related projects of new quality productivity, and certain financial subsidies will be given to enhance the motivation and competitiveness of enterprises in related research and development.

Secondly, strengthen talent cultivation and introduction. Actively promote deep cooperation between universities and industrial enterprises, and offer targeted professional courses around new quality productivity for corresponding personnel at various levels of universities. Junior colleges are dedicated to basic education in technology application, while higher education institutions are dedicated to training and education in innovative research and development of new technologies. Through practical training with enterprises, courses are combined with front-line technology to cultivate high-quality talents that meet the needs of industrial development. At the same time, various provinces and regions have implemented preferential policies, implemented talent relocation subsidies, attracted high-quality talents from universities to enter relevant enterprises, and attracted overseas high-end talents and teams to start

ISSN 2616-5902 Vol. 7, Issue 5: 64-71, DOI: 10.25236/AJBM.2025.070508

businesses and employment locally, providing a talent foundation for the development of industrial economy, driving innovation for enterprise development, and promoting the development of high-quality industrial economy.

The western region is promoting the construction of basic transportation, reducing transportation costs, increasing resource and capital flow rates, and facilitating the exchange, communication, and learning of high-quality talents from various regions. Striving for balance between new and traditional infrastructure construction and narrowing the gap between regions. Local governments formulate differentiated industrial policies based on the actual situation in each region, and provide precise support to enterprises that strive to develop new quality productivity. Local governments will enhance financial support and guide financial institutions in developed regions of eastern and central China to increase credit for new quality productivity industrial projects in underdeveloped western areas, reduce loan interest rates, establish special development funds, and promote coordinated high-quality development of industries in various regions under the background of new quality productivity from multiple aspects.

References

[1] Liu Shouying, Huang Biao From Traditional Productivity to New Quality Productivity [J]. Journal of Renmin University of China, 2024,38 (4)

[2] Pan Jiantun, Tao Hongling The Three Dimensions of Understanding the Connotation Characteristics of New Quality Productivity [J]. Journal of Xi'an Jiaotong University (Social Sciences Edition) 2024, 44 (4)

[3] Liu Xuexin, Cao Chengzi, Kong Xiaoxu. Theoretical Logic and Implementation Path of the Formation of New Quality Productivity under the Background of Great Power Competition. Journal of Chongqing University (Social Sciences Edition), 2024, 30 (1): 145-155

[4] Zeng Li, Xie Pengjun. The Context, Functional Positioning, and Practical Path for Accelerating the Formation of New Quality Productivity. Economic Vertical and Horizontal, 2024, (12): 29-37

[5] Wang Ke, Guo Xiaoxi The level of new quality productivity in China, regional differences, and spatiotemporal evolution characteristics [J]. Statistics and Decision making, 2024, (9): 30-36

[6] Lu Jiang, Guo Ziang, Wang Yuping. Development level, regional differences, and improvement path of new quality productivity [J]. Journal of Chongqing University (Social Sciences Edition), 2024, (3): 1-17

[7] Ye Qing, Wang Wulin. Study on the Impact of New Quality Productivity on the High Quality Development of Manufacturing Industry [J]. Journal of Natural Sciences, Hunan Normal University, 2025, 48 (1): 66-75

[8] Chao Xiaojing, Wang Qing. The Logic and Path of High Quality Development Driven by New Quality Productivity [J]. Journal of Xi'an University of Finance and Economics, 2024, 37 (1): 12-20

[9] Xie Baojian, Li Qingwen. Analysis of the driving effect of new quality productivity on the transformation and upgrading of manufacturing industry: based on the investigation of the digital economy in the Pearl River Delta [J]. Technology Economics and Management Research, 2024, (5): 1-10

[10] Yu Donghua, Tian Shuang Global Value Chain Embedding, Mismatch of Technological Resources, and Transformation and Upgrading of Manufacturing Industry [J]. Research on Financial Issues, 2019, (10): 35-43

[11] Han Jie Research on the Impact of Intelligent Transformation on Technological Innovation of New Energy Vehicle Enterprises [D]. Nanjing University of Information Science and Technology, 2024. DOI: 10.27248/d.cnki.gnjqc.2024.001697

[12] Zhu Fuxian, Li Ruixue, Xu Xiaoli, etc Construction and spatiotemporal evolution of China's new quality productivity indicators [J]. Industrial Technology and Economics, 2024, 43 (03): 44-53

[13] Gao Panfeng. Agglomeration of Innovation Factors, Digital Transformation, and High Quality Economic Development [J]. Statistics and Decision making, 2024 (15): 98-103

[14] Cheng Xiaoping, Fu Huan The Impact of New Quality Productivity on China's Economic Growth: Mediating Effect Based on Factor Agglomeration and Regulating Effect of Industrial Structure [J]. Journal of Chongqing University of Technology, 2025, 39 (2): 60-75. DOI: 10.3969/j.issn. 1674-8425 (s). 20225.01.006

[15] Zhang Yiting Research on the Impact of Technology Finance on Industrial Structure Upgrading [D]. Xi'an University of Technology, 2024. DOI: 10.27398/d.cnki. gxalu.2024.001354

[16] Wen Zhonglin Zhang Lei, Hou Jietai, etc Mediation effect testing procedure and its application [J]. Chinese Journal of Psychology, 2004, (05): 614-620