

COMPREHENSIVE ASSESSMENT OF THE LEVEL OF HIGHER EDUCATION DEVELOPMENT IN THE REGIONS OF CHINA

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This article is devoted to the study of the impact of investment in education on economic development. Investment in education can improve human capital, promote technological innovation, increase labour productivity, and improve social welfare. Through empirical analysis and regression analysis methods, the article considers China's education investment amount and total GDP from 2001 to 2021 as the data basis. The results show that the amount of investment in education is highly positively correlated with GDP, which supports the view that investment in education can greatly promote economic development. Therefore, policymakers should focus on investment in education and increase investment in education to improve the quality and efficiency of economic development.

Keywords: education investment; economic development; empirical analysis; regression analysis; GDP.

ВЛИЯНИЕ ИНВЕСТИЦИЙ В ОБРАЗОВАНИЕ НА ЭКОНОМИЧЕСКИЙ РОСТ

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Статья посвящена изучению влияния инвестиций в образование на экономический рост. Инвестиции в образование улучшают человеческий капитал, обеспечивают продвижение технологических инноваций, увеличивают производительность труда, способствуют улучшению социального климата. Методами эмпирического и регрессионного анализа изучается влияние инвестиций в образование Китая на ВВП страны в период с 2001–2021 гг. Результат исследования показывает, что объем инвестиций в образование положительно коррелирует с ВВП, что подтверждает возможность их влияния на экономический рост. Таким образом следует сосредоточиться на увеличении инвестиций в образование с целью улучшения качества и эффективности экономического развития.

Keywords: education investment; economic development; empirical analysis; regression analysis; GDP.

Introduction

Education is the foundation for the development of a country or region and plays an important role in promoting economic growth and social progress. Investment in education is an important means to improve human capital, promote technological innovation and improve labour productivity. This article will explore the impact of investment in education on economic development, with a view to providing a reference for policymakers, see [4–6].

Main points

(1) Educational investment and human capital

Human capital refers to the knowledge and skills acquired by individuals through education and training, and is a key factor in economic growth. Investment in education can improve human capital, thereby increasing labor productivity and economic growth. Research shows that there is a positive relationship between investment in education and economic growth. Increased investment in education can improve the skill level of the workforce so that they can better adapt to the needs of economic development, thereby promoting economic growth.

(2) Educational investment and technological innovation

Investment in education not only improves human capital but also promotes technological innovation. Education can provide the necessary knowledge and skills to enable people to conduct scientific research and technological development, thereby promoting technological innovation. In addition, education can also cultivate the spirit of innovation and entrepreneurship, encourage people to engage in innovative activities, and thereby promote economic development.

(3) Education investment and labor productivity

Investment in education can increase labour productivity, thereby driving economic growth. Education can improve labor productivity by improving the skill level of the workforce so that they can better perform work tasks. In addition, education can also improve the innovative ability of the labor force, enabling them to come up with new working methods and production technologies, thereby increasing labor productivity.

(4) Education investment and social welfare

Investment in education can not only promote economic development, but also improve social welfare. Education can improve people's health and quality of life, thereby improving social welfare. In addition, education can also improve people's employment opportunities and income levels, thereby improving social welfare.

Case analysis

This article selects China's education investment amount and total GDP from 2001 to 2021 as the data basis, and uses empirical analysis and regression analysis methods to process the data (cf. [1, 2]).

The model is now as follows:

$$\ln y = C + \beta \ln x + \delta.$$

Among them, C is a constant term, β is the parameter to be estimated, d is the residual term. The model regression image is shown in the fig. 1, and the regression results and model tests are shown in the fig. 2.

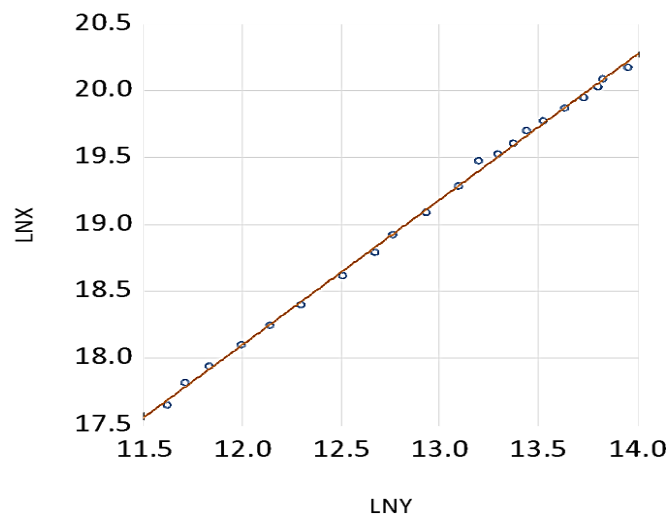


Fig. 1. Regression

Dependent Variable: LNY Method: Least Squares Date: 02/15/24 Time: 05:07 Sample: 2001 2021 Included observations: 21				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNK	0.920595	0.007886	116.7452	0.0000
C	-4.662157	0.150742	-30.92808	0.0000
R-squared	0.998608	Mean dependent var	12.92083	
Adjusted R-squared	0.998535	S.D. dependent var	0.754627	
S.E. of regression	0.028887	Akaike info criterion	-4.160442	
Sum squared resid	0.015855	Schwarz criterion	-4.060963	
Log likelihood	45.68464	Hannan-Quinn criter.	-4.138852	
F-statistic	13629.43	Durbin-Watson stat	1.089058	
Prob(F-statistic)	0.000000			

Fig. 2. Screenshot of analysis of the model

From the above results, we can conclude that the amount of investment in education is highly positively correlated with GDP [3], which supports the previous point that investment in education can greatly promote economic development. In practical applications, policymakers should increase investment in education to promote economic growth. However, this article has not yet analyzed the factors that are most affected by the amount of investment in education among the above factors that affect economic development. This can be continued in subsequent research.

Conclusion

Overall, investment in education has an important impact on economic development. Investment in education can increase human capital, promote technological innovation, increase labour productivity, and improve social welfare. Therefore, policymakers should pay attention to investment in education and increase investment in education to improve the quality and efficiency of economic development.

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