



ҚАЗАҚСТАН РЕСПУБЛИКАСЫ
ТҰҢҒЫШ ПРЕЗИДЕНТІ - ЕЛБАСЫНЫҢ ҚОРЫ

«ҒЫЛЫМ ЖӘНЕ БІЛІМ – 2017»

студенттер мен жас ғалымдардың
XII Халықаралық ғылыми конференциясының
БАЯНДАМАЛАР ЖИНАҒЫ

СБОРНИК МАТЕРИАЛОВ

XII Международной научной конференции
студентов и молодых ученых
«НАУКА И ОБРАЗОВАНИЕ – 2017»

PROCEEDINGS

of the XII International Scientific Conference
for students and young scholars
«SCIENCE AND EDUCATION - 2017»



14th April 2017, Astana



**ҚАЗАҚСТАН РЕСПУБЛИКАСЫ БІЛІМ ЖӘНЕ ҒЫЛЫМ МИНИСТРЛІГІ
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The proceedings are the papers of students, undergraduates, doctoral students and young researchers on topical issues of natural and technical sciences and humanities.

В сборник вошли доклады студентов, магистрантов, докторантов и молодых ученых по актуальным вопросам естественно-технических и гуманитарных наук.

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The research motivation of this paper

With the advent of the era of knowledge economy, the role of education in economic growth is increasingly recognized by economists. As early as 20th and the 21st century and 60s, American economist Theodore W. Schultz in many classic paper of education and economic growth relatively completely put forward the "human capital". Since Schultz, more and more economists begin to regard education as the influence of a country's economic growth. Because of the inspiration and influence of human resource theory, the domestic and foreign economists have published a great deal of theoretical and empirical research on the contribution of economic growth. The role of education in a country's economic growth has been raised to a unprecedented height

Abstract

First, the article introduces the concept of education invest, the relation of education invest and economy increasing; second, and compare to national standards; moreover, the relation between education invest and economy development is demonstrated, to weight the regional difference of education development, study the acceleration effect of education to economy and social development, analysis the main reasons of regional difference of the education development. The increase education investment is helpful in promoting our country actual economic output growth, but reducing the education investment will restrict our country actual economic output growth. There is some interaction balance relation between the education investment and actual economy growth, and there is a high correlation between them. So we should realize the importance of education investment to economic growth, and try to change the shortage problem of education investment, and form the benign recycle between the education investment and the economy. It has the extremely important strategic sense in China.

Key words: Education, investment, Economy growth, higher education resources, High tech industry base, Industrialization of Universities Educational investment, refers to the sum of all the expenses in the form of money for the sake of the cultivation of different skilled labor force and improve the labor ability of the existing workers, some resources putted in the education field such as human, material and financial resources. The characteristics of China's educational investment system are shown in two aspects. First, she has gradually formed a Multi-channel financing investment system of education funds, second is the classification of running schools, grading management system. The relation of the education investment and the economical growth always is the important topic. In the later period of 20th century, education investment, as one of the important factors, becomes popular in the academic field. Moreover many experienced studies also unceasingly confirm that the education investment has important contribution to national economy development. Since the reform and open policy, every province (city) of China increases the education invests. Since the

education investment has the very major function to the local economical development, and then the difference of education invest inevitably also one of the important factors which cause the economy different in the regions. However, in present, the studies only use the difference of education degree to explain the difference of regional economy development. Obviously, this is not enough. Education as the main factors of economy development, the effect of development scale and structure also is the effect mechanism to cause regional economic development. The effect of education investment on economic development is not direct, but indirectly through social and economic factors impact on economic development. Specifically, the effect of education on economic development is transmitted through two levels, one side, education can promote the optimization of human capital in particular, to improve the work or production efficiency of the labor force. On the other hand,

education can improve the social and economic environment of human life and production,so as to promote the productive forces through the optimization of the living environment improve the quality of life and the improvement of people.

I. The effect of higher education resources teaching investment on economy

Higher education resources teaching investment including the school's teaching land,housing construction, equipment, teaching staff,enrollment specialty, enrollment scale, academic year and educational investment funds.Although there is no doubt of higher education resources's Promoting effects which are invested in the economy ,but thanks to the complexity of the channels this article would shows these ways into five kinds of analysis.

(1) By Increasing consumption to promote the role of the economy.Which is, through the expansion of college and stimulating a large number of consumption, Including the student's tuition fees, accommodation, meals and mouth often study and living expenses, etc. In the absence of a large amount of money in the country and the financial situation, the formation of a huge new economic growth point in the short term.First, the University as the center of the real estate industry, business, the development of the catering industry. The survey shows that, on average, every increase in college students, will increase the consumption of about 7300 yuan.This is the data released in 2002, and now will be more. Again, the development of University Tourism, university teachers and students have enough vacation, quite a lot of travel demand, also have certain economic conditions,and have made certain contribution to the regional economic development.Therefore, higher education resources can be invested in the current period to produce considerable economic benefits

(2)Promoting the economy through the investment of higher education fund.Hongkong Who was Praised as the "four little dragons of Asia" , South Korea, Singapore and Taiwan. The rapid economic growth of them has benefited from paying high attention to education,the sustained and rapid development of China's economy More importantly it is closely related to the strategic policy "Develop The Country Through Science And Education " which is put forwarded by President Hu Jintao. 1978-2012 years China's eastern, central and western regions' education funding Investment and output elasticity respectively as 0.151, 0.162, 0.47. Contribution rate of GDP growth rate is 23.37%,

18.94% , 62.34%. The marginal revenue of educational fund investment in the western region is far greater than that in the East. Its contribution rate is much more than in the East,but the absolute total amount of investment in Education. As we could see, Investment in education has a promoting effect on economy but the regional contribution rate of different development level is not a simple linear relationship.

(3)Promoting the economy through the production of high level human resources. Human capital and technological progress are the key factors to promote economic growth in the era of knowledge economy. The purpose of higher education resources teaching investment is to cultivate talents,produce more advanced human resources. Improving the scientific and technological content of products through the transformation of high human resources into human capital or the development of new products, new materials, to seek alternative materials to make up for the existing material resources and financial resources, such as the lack of hard resources for promoting economic growth.Because cultivating of talent need a certain time. Undergraduate education generally requires four years,master, doctoral education time is more longer.Therefore, the higher education resources investment has a certain lag. In this paper, the GDP growth rate is used as the indicator of economic growth.The growth rate of the number of college graduates as the output indicators of higher education resources,human capital growth rate as the index of human capital growth which is based on the data of our country in 2010, the growth rate of the fixed base is calculated for 100 years.Growth rate of college graduates and economic growth rate's correlation coefficient is 0.93.The correlation coefficient between the growth rate of human capital and the economic growth rate is 0.96.Are highly positively correlated.Higher education teaching visible output has made a remarkable contribution to economic growth.And with the development of economy, its contribution will be bigger and bigger.The relationship between the three is shown in chart 3.20

(4) The input of higher education resources in different majors will affect the change of regional economic structure. Economic development can not be separated from the changes in the economic structure. And the proportion of higher education resources in different disciplines professional directly affects the output ratio of different professional talents, so as to affect the change of economic structure and the development of regional economy. Zhang Di analysis of the structural adjustment of higher education specialty and the correlation of GDP. In the professional structure of Higher Education He had got the conclusion of the close relationship between Law, engineering, economics, literature, education and other professional students and the economic development. And puts forward some related policy suggestions on the structural adjustment of higher education specialty. This point and the front of the third points into the interaction of positive and negative two aspects

(5) The efficiency of management plays a role in promoting economic development. Firstly, the process of economic activity is reconstructed or reformed by cultivating high quality management personnel, proceeding management and innovation, improve the labor efficiency of the whole enterprise to promote the economic development. Such as colleges and universities to run MBA and EMBA training courses training high level management talents for enterprises. Also through the knowledge spillover process with the chain effect, imitation effect, communication effect, competition effect, driving effect, incentive effect can improve the overall quality of the worker in order to improve the per capita labor efficiency, To produce economic benefits and social benefits to economic development.

II Higher education resources scientific research investment's promoting effects on economic development

With the advent of the knowledge economy, the dominant resource and production factor is knowledge rather than the general labor force and capital. University scientific research has become the main position of scientific and technological innovation and knowledge innovation. Knowledge economy directly depends on knowledge innovation, dissemination and application. Higher education resources scientific research investment is conducive to the creation of knowledge, create new technologies, and through the transformation of achievements in economic development play an important role.

(1) Analysis on the role of economic development from the perspective of investment consumption. Both horizontal and vertical research topics, its funding should be put in place. From the investor's point of view is the investment of scientific research results from the perspective of the whole economic operation is a kind of consumption. Therefore, whether it is investment or consumption, research funding to play a stimulating role in the local economy. A comparative study on the funds of scientific and technological cooperation and the economic growth of Chongqing in the period of 1998-2003 indicate that the growth of scientific research and economic development has the trend of synchronization scientific research is growing faster than economic growth. It shows that there is a necessary connection between economic growth and scientific research. Therefore, higher education resources scientific research investment, from the perspective of consumption, its benefits are produced in the current; from an investment point of view, its benefits are produced in the next few years.

(2) Analysis of the role of economic development from the type of scientific research output. There are two aspects, first is the basic research, another is the application of research. Basic research may play a role in promoting the economy in a number of years. Once played, the economy is going to change dramatically. The result of basic research is very significant to the economic development. Some scholars have studied the relationship between the basic research and the social demand of the country and the stage of economic development. Some scholars have studied the relationship between the basic research and the social demand of the country and the stage of economic development. The research results show that different economic development stages in different countries or regions are different in the demand for basic research. There are different effects on it. The other way round, Basic research results in different countries or regions in different economic development stage of the economic development of the role is also different. Zhang Wei and some professors researched on the measurement of the contribution of scientific research in universities to the economic construction in

2010. Results show that Eastern, middle and Western Regions have significant differences between regions, and decrease progressively. Comprehensive index score of three regions are 32.14, 12.87 and 6.56, respectively. The ratio between the three is 0.4: 1: 0.2 "03". Visible, higher education resources research foundation research into the lag period is longer, the lag time of the application research is relatively short.

(3) The role of local economic development from the perspective of the transformation of scientific research achievements. Both basic research and applied research if there is no scientific research achievement transformation then we can't talk about the huge role in promoting the economy. Transformation of scientific research achievements in three ways, First, the transfer of patents or technology universities, to make scientific and technological achievements directly into the local industry, promote the development of local economy. Second is funded by the enterprise or the configuration of equipment, Colleges and universities invest in scientific research and human resources, combine to make achievements. Production and sales by enterprises. Third is colleges and universities invest all scientific research resources including scientific research, human resources equipment for mass production factories. From scientific research to achievement transformation, from mass production to product sales or after sales service, all by the university to complete. Such behavior, greatly shorten the cycle of local economic benefits

(4) The important role of College Industry. Science and technology industry in Colleges and Universities are market-oriented. And also could give full play to the advantages of scientific research, Realize development research, the results of incubation and scale production as one High tech industry base. Not only can provide the training base for the students, and the more important is to make the rapid transformation of high-tech achievements, Make the higher education resources directly combine with the local economy, serve the local economy promote the rapid growth of local economy. Combination of scientific research and industry in Colleges and Universities first, is able to catalyze the birth of new high-tech industry, can help them transform and optimize the local industrial structure and promote labor intensive to knowledge intensive transformation. Second, it will greatly promote the development of productive forces. Two research universities in the United States, Stanford and Berkeley drive more than 7 thousand enterprise companies. 2010 income of up to \$150 billion. Harvard University and Massachusetts Institute of Technology with "Technology Research Triangle Park" in North Carolina act in a good cooperation. Formed a huge "Golden Triangle" and led a huge rapid economic growth in the United States. In China the research of some universities and colleges in Optics Valley, Wuhan, occupy the first place in China, some have reached the international level. Enrich the type of optical products, improve the high-tech content of products. Drive the development of regional productivity. Zhongguancun Beijing electronic street, Electronic city of Xi'an, Tsinghua Tong Fang, Central China numerical control and other enterprises. All of them are Higher education resources scientific research investment, combine production and research. They are successful examples of the promotion of local economic growth. Fully reflects the "science and technology is the true meaning of productivity". Again, provide graduates with "employment" and "entrepreneurial" employment posts. Reduce social employment pressure. Make the further development of higher education employment system. In Industrialization of

Universities, the economic benefits of higher education resources investment in local economy and society are enormous.

Literature

1. JanzouSun «Why high education is necessary in every contrary»