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The Relationship Between Technology and Financial Development

Investigation in China

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1. Introduction

1-1 Science and technology is the first productive force.

Look, ancient and modern, Chinese and foreign each progress of human society, and is accompanied by the progress of science and technology. Especially the rapid development of modern science and technology, for social productivity development and human civilization has opened up a broader space, vigorously promoted the development of economy and society. China's computer, communication, biomedicine, new materials and other high-tech enterprises, the rapid growth of greatly improved the level of industrial technology in China, promoted the industrial, agricultural labor productivity rate increased significantly, effectively lead to the development of the whole national economy. Practice has proved that high and new technology and its industry has become the leading industries in the development of modern economy.

Science and technology is the sign of human civilization. The progress of science and technology and popularization, provides human beings with radio, television, film, video, Internet and other new means of communication, culture, make the construction of spiritual civilization has a new carrier. At the same time, it to rich people's spiritual life. The progress of science and technology have created enormous material wealth for human being and the spiritual wealth. (Baidu, 2006)

1-2 The nature of the financial value is circulation. : the types of financial products have a lot of, mainly including Banks, securities, funds, insurance, trust, etc. Financial academic field is very wide, involved

mainly include: accounting, finance, investment, banking, securities, insurance, trust and so on.

Finance is a kind of trading activities, financial transactions of this financial figure

Itself does not create value, why in financial transactions will have to make money? According to Mr.Chenzhiwu, a financial transaction is a realizable way of future income, spending tomorrow's money today from. Simply a financial transaction is how often reflect a region, regional and even national economic prosperity ability important index. (Wu, 2011)

The concept of traditional financial discipline is the study of monetary capital circulation. The modern financial essence is the capitalization of the business process.(Baidu, 2006)

1-3 Financial belongs to the category of financial industry, science and technology is mainly refers to the integration of science and technology industry and financial industry. Relying on science and technology to promote economic development, and the development of science and technology industry needs the financial strength. Under the help of financial, science and technology industry present a new face in due course, the application of computer, the popularization of network, the development of wireless technology is under the support of financial play the role of promoting economic development. Technology and financial belong to different industries, in the process of integration must face a lot of trouble. All countries in the world in efforts to promote the development of science and technology, financial, the financial industry development in our country is relatively late, so you need to do more practice and explore. Due to the high-tech enterprise is usually a high risk industry, at the same time financing demand is bigger, therefore, the fusion of science and technology industry and financial industry is more of a science and technology enterprises to seek financing process.(Lili, 2008-11-1)

Zhao Changwen think financial refers to promote the development of science and technology, science and technology achievements transformation and high and new technology industry development of a series of financial tools, financial system, financial policy and financial service system, innovative arrangement, is provided by the science and technology innovation activity integrating resources of the government, enterprise, market, social intermediary agencies and other main body and its activities in science and technology innovation financing process to form a system, is the national science and technology innovation

system and an important part of the financial system. Further promote the financial innovation and the combination of science and technology innovation is not only the realistic choice of China's response to the global financial crisis, but also for the future to improve the independent innovation ability, can realize economic society sustainable development, to build an innovation-oriented country, enhance the international competitiveness of important strategy. The current scientific and technological resources and financial resources are the two of the most active factor in productivity, is in an unprecedented degree in the mutual combination and mutual promotion of the new stage, it is a trend to lay the basis of the financial production and the development of science and technology.(Changwen, 2011)

Against this background, it will with this program, general ideal include 2 point.

1. Why the relationship between technology and financial development very important?
2. Why technology can promote financial rise in China?

2 Review of literature

2.1 An overview technology and financial in China

With the advent of the era of knowledge economy and the speeding up of economic globalization, international competition is becoming increasingly fierce. Science and technology innovation becomes the multitudinous national comprehensive national strength and core competitiveness of the preferred path. In 2006 the Chinese government has established the development strategy of constructing innovative countries, and yet innovative national construction is a complicated system engineering, need to be conducive to innovation systems and mechanisms. Among them, the financial is to promote scientific and technological innovation an important mechanism and institutional arrangement. A fully functional, operational and efficient financial system not only can the funds needed for the financing innovation, but also has the diversification, incentive constraints, such as price discovery function, is the escort of science and technology innovation. In recent years, the Chinese government departments have launched a series of financial supporting policies and preferential measures, the combination of science and technology and finance has made great progress. Enterprise financing difficulties, the innovation of science and technology, however, low efficiency and other issues still exist. To solve these problems, the author further illustrates the mechanism of financial to promote scientific and technological innovation, summarizes the successful experience of foreign financial support for scientific and technological innovation, and investigates the

present situation of China's financial support of science and technology innovation, reveals the Chinese financial support technological innovation factors, an empirical analysis of China's financial support and the relationship between the science and technology innovation, puts forward the optimization Suggestions on China's technology innovation system of financial support.(China technology and financial promotion association , 2013-10-12)

2.2.1 Definition of technology

Science and technology is the use of "relevant research objective things exist and the related law doctrine" for own use, the knowledge used for everyone. It should be pointed out that, because the study of objective things different, "science" and "science and technology" is the concept of two can convert each other, namely science as a science and technology, so to speak, can say as a science of science and technology.

Science and technology has both advantages and disadvantages, it is a double-edged sword, only use it well, to benefit mankind.

- 1,For traditional, science is accumulation of human knowledge system about nature, society and thinking.
- 2,We mean by "scientific" refers to the study of natural phenomena and laws of natural science; Technology refers to according to the principle of natural science production practice experience, for a real purpose and the coordination of various tools, equipment, technology and process system, but not including content and social sciences, the corresponding technology.
- 3,Science and technology is a dialectical unity technology proposed subject, complete subject of science, science is found that theoretical guidance technology; Technology is invented, it is the practical application of science.

(Baidu, 2006)

2.2.2 The importance of technology and the factors affecting the development of science and technology of China

The importance of science and technology in contemporary society is demonstrated by the unconscious use of it in our daily lives. We often take it for granted. And we often have no idea how science and technology really affect us! We live and work in structures given to us by science and technology. We are transported around on the ground, across water and in the air by vehicles that are the direct result of science and technology. Modern societies are literally built on science and technology. When we turn on the tap, flush the toilet, or flip a light switch, we are accessing science and technology.

We constantly use cell phones and computers, which are gifts of science and technology. And there are myriad other electrical devices that science and technology have given us. Medicine is wall-to-wall science and technology, and anyone who is more than mildly ill or has been injured in more than a minor way will benefit from science and technology. No food in modern society is not touched by science and technology, either in its origin, packaging and processing, transportation or vending. (Human Studies: The importance of science and technology, 2011)

The factors affecting the development of Chinese science mainly has the following several aspects: 1, concept updating is a key factor of our country's science and technology progress of science and technology is the first productive forces, especially the development of high and new technology but also the important sign of comprehensive national strength. 2, Continue to deepen reform of science and technology system and provides the system guarantee for the progress of science and technology in the process of economic system reform, gradually deep into science and technology system reform. 3, Education and education pattern. (Jianru, 2006)

2.3 Definition of financial

1. (Economics, Accounting & Finance / Banking & Finance) of or relating to finance or finances
2. (Economics, Accounting & Finance / Banking & Finance) of or relating to persons who manage money, capital, or credit
3. Austral and NZ informal having money; in funds
4. Austral and NZ (of a club member) fully paid-up

(Collins English, 1991)

Finance is the currency and credit activities and the floorboard of the economic activity associated with it, the generalized finance refers to the issue of all and credit currency, storage, exchange, clearing and finance related economic activities, including buying and selling of gold and silver, special financial refers specifically in the currency of the credit financing.

(China finance, 2013)

2.3.1 Finance Influence factor of financial innovation in China

With the rapid development of world economy, financial innovation and financial globalization has gradually become a remarkable feature in today's world financial development. Especially since the 1970 s, represented by the western market economy countries, financial innovation has entered a large-scale,

comprehensive peak. Widespread adoption of new technology, there are plenty of new tools, New Deal, constantly forming new trend poured on to the financial fields. (Shiyin, 2003)

With the development of China's reform and opening up, the role of finance in the modern economy and the impact is more and more big, the financial innovation is before us, it has become one of the salient features in today's world financial development. So-called financial innovation is refers to the various financial elements in the financial sector, which refers to financial institutions and financial authorities for their own economic interests, the new financial product innovation, the development of new financial instruments, financial markets and financial system of the rearranged and other activities. Financial innovation is the sublation of the traditional financial system, will reach the mechanism and the adjustment of the interest structure, so it is rigid, political and legal factors, financial risk factors, market factors and technical factors such as constraints. (Shiyin, 2003)

2.4 The relationship between technology and financial:

Based on the point of historical evolution of the relationship between the scientific and technological progress and financial innovation is analyzed, this paper analyzes the mechanism and the interactive development in the future development trend, and financial innovation in China lags behind that of the real progress in science and technology and gives the policy Suggestions to promote the development of the financial sector. (Xun, 2009)

2.4.1 technology and financial relations are very close:

The concept of science and technology innovation is not a strict, science is found that technology is invented, only the scientific knowledge and technology invention is entrepreneurs into commercial activities, is called innovation (bear bits, 1942). (bits, 2012)

Look from the successful experience of international "innovative country", the technological revolution and the relationship between financial innovation can also be called social wealth created by the two wings (han, internal report, 2005). From the statistical data of nearly 40 years, the world's developed countries and developing countries the huge gap of economic growth, the main reason is that the gap between technological progress contribution to economy growth. Technological progress in the developed countries for the growth of the gross national product (GNP) contribution rate, from 5% to 20% in the early 20th century, 50 s rose to about 50%, rising to 60% to 60% in the 80 s. And developing countries, the contribution rate of technological progress on economic growth is generally lower than the developed

countries, between 1960 and 1987, 68 developing countries in the technological progress contribution rate is only 14%. (Perez, 2002)

3 Methodology:

3.1 Sampling

Sampling survey is a kind of comprehensive survey, it from all survey research object, the selected part of the unit to investigate, and consist of all survey research object to make estimates and inferred a research method. Obviously, although is a comprehensive survey of sampling, but it is the purpose of the is obtained reflect the overall situation of information, therefore, also can have the effect of a full investigation.

The study samples including China business professional college students, PU students, China bank staff, technicians and other workers. The unit of analysis was the individual people. This research maybe can get 300 respondents.

3.2 Respondent profile

In order to ensure the rationality of this study is to investigate, appropriate, set a reasonable target population extensively, there is a about the sex of the survey population, income, education degree, etc.

| N | % |
|--------------------|---|
| Gender: | |
| Female | |
| Male | |
| Total | |
| Age: | |
| 18-35 years | |
| 36-45 years | |
| 46-55 years | |
| 56-65 years | |
| 66 years or older | |
| Total | |
| Income: | |
| Less than \$40,000 | |
| \$40,000-\$79,999 | |
| \$80,000-\$119,999 | |

\$120,000-\$159,999

\$160,000-\$199,999

\$200,000 or over

Total

Education:

High school

Vocational/technical

Some college

College

Graduate

Total

Note: The total percentages do not add to 100% because of missing responses.

3.3 Data collection

Based on the results of a survey from various areas and population, and summarize the materials and other related materials, combined with field investigation, using the Investigation method is questionnaire survey. Use the question carding be survey tools and comprehensive comparison of the investigation progress of population regions, serious results, focus on research and analysis in promoting system and mechanism, organization, technology and financial tools and products innovation practice and experience of practice and highlight the common problems facing, etc.

Questionnaire survey by question and answer mode, coding and other information of four parts. And the investigation using subjective questions and enclosed answer ask and answer.(Baidu baike, 2006)

KMO and Bartlett's Test

| | | |
|--|--------------------------|---------------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | .438 |
| Bartlett's Test of Sphericity | Approx. Chi-Square of df | 116.024 28 |
| | Sig. | .000 |

This table is by comparing the simple correlation coefficient and partial correlation coefficient between the variables determine the correlation between variables, the size of the strong correlation, partial correlation coefficient is far less than simple correlation coefficient, KMO value is close to 1. In general, $KMO > 0.9$ very suitable for factor analysis; $0.8 < KMO < 0.9$ fit; Well above 0.7, 0.6, while the effect is very poor, 0.5 the following is not suitable for factor analysis.

Communalities

| | Initial | Extraction |
|----------|---------|------------|
| VAR00002 | 1.000 | .623 |
| VAR00003 | 1.000 | .901 |
| VAR00005 | 1.000 | .751 |
| VAR00009 | 1.000 | .770 |
| VAR00010 | 1.000 | .793 |
| VAR00012 | 1.000 | .765 |
| VAR00013 | 1.000 | .776 |
| VAR00015 | 1.000 | .846 |

This table refers to each variable in each square sum of the load of the common factor. According to the rule of Kaiser, the problem of the average intercommunity best in 0.70 above, if the sample is more than 250, the average common degrees above 0.60 conform to the requirements.

Reproduced Correlations

| | VAR00002 | VAR00003 | VAR00005 | VAR00009 | VAR00010 | VAR00012 | VAR00013 | VAR00015 | |
|------------------------|----------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Reproduced Correlation | VAR00002 | .623 ^a | -.117 | .462 | .343 | .091 | -.234 | -.027 | .290 |
| | VAR00003 | -.117 | .901 ^a | -.162 | -.045 | .224 | -.230 | .158 | -.003 |
| | VAR00005 | .462 | -.162 | .751 ^a | .058 | .315 | .008 | -.012 | -.213 |
| | VAR00009 | .343 | -.045 | .058 | .770 ^a | -.027 | .045 | .574 | .277 |
| | VAR00010 | .091 | .224 | .315 | -.027 | .793 ^a | .477 | .012 | .127 |
| | VAR00012 | -.234 | -.230 | .008 | .045 | .477 | .765 ^a | .202 | -.026 |
| | VAR00013 | -.027 | .158 | -.012 | .574 | .012 | .202 | .776 ^a | -.201 |
| | VAR00015 | .290 | -.003 | -.213 | .277 | .127 | -.026 | -.201 | .846 ^a |
| Residual ^b | VAR00002 | | .048 | -.245 | -.100 | -.032 | .154 | -.005 | -.149 |
| | VAR00003 | .048 | | .038 | .035 | -.132 | .146 | -.083 | -.013 |
| | VAR00005 | -.245 | .038 | | .016 | -.108 | .001 | .019 | .162 |
| | VAR00009 | -.100 | .035 | .016 | | .016 | .007 | -.205 | -.088 |
| | VAR00010 | -.032 | -.132 | -.108 | .016 | | -.192 | .047 | -.048 |
| | VAR00012 | .154 | .146 | .001 | .007 | -.192 | | -.098 | -.042 |
| | VAR00013 | -.005 | -.083 | .019 | -.205 | .047 | -.098 | | .117 |
| | VAR00015 | -.149 | -.013 | .162 | -.088 | -.048 | -.042 | .117 | |

Component Transformation Matrix

| Component | 1 | 2 | 3 | 4 | 5 |
|-----------|-------|-------|-------|-------|-------|
| 1 | .657 | .369 | .584 | .297 | -.063 |
| 2 | .066 | .792 | -.301 | -.505 | .151 |
| 3 | .703 | -.326 | -.551 | .001 | .310 |
| 4 | -.266 | .265 | -.130 | .651 | .648 |
| 5 | -.021 | -.246 | .498 | -.483 | .677 |

The table to see the size of the coefficient of each variable in each factor, represent the factor variable load size, generally greater than 0.5 is attributed to the factor.

4.The questionnaire survey:

There is a research table, the answer is lost of students and some business. I use 1,2,3,4,5 distinguish answer.

The means is: 1 strongly agree, 2 agree, 3 neutral, 4 not agree, 5 strongly not agree.

| Question | 1 | 2 | 3 | 4 | 5 |
|--|---|---|---|---|---|
| 2.1An overview technology and financial in China | | | | | |

| | | | | | |
|--|--|--|--|--|--|
| 1 If you want to enhance comprehensive national strength, you have to technological innovation. | | | | | |
| 2 The Chinese government has established a development strategy to build an innovation-oriented country is a correct decide. | | | | | |
| 3 China needs to learn foreign advanced technology | | | | | |
| 2.2.1 Definition of technology | | | | | |
| 1 The concept of science and technology different | | | | | |
| 2 Technology is a double-edged sword | | | | | |
| 3 Technology is a kind of invention. | | | | | |
| 2.2.2The importance of technology and the factors affecting the development of science and technology of China. | | | | | |
| 1 Technology is everywhere in our life | | | | | |
| 2 Concept update is a key factor for technology. | | | | | |

| | | | | | |
|--|--|--|--|--|--|
| 3 Education mode is very important for technology and finance develop. | | | | | |
| 2.3 Definition of financial | | | | | |
| 1 Finance is not just about money, also is contains a wide range of industries. | | | | | |
| 2 Finance is the generic terms of the monetary and credit activities | | | | | |
| 2.3.1 Finance Influence factor of financial innovation in China | | | | | |
| 1 With the rapid development of world economy. The function of financial more and more important | | | | | |
| 2 The reform and opening-up policy have a big influence China's financial sector | | | | | |
| 3 Financial by political, risk and so on factors bound. | | | | | |
| 4 The western developed countries is the world's largest financial market | | | | | |
| 2.4 The relationship between technology and financial | | | | | |
| 1 China's financial has good prospects for development | | | | | |
| 2.4.1 technology and financial relations are very close | | | | | |

| | | | | | |
|--|--|--|--|--|--|
| 1 A country need financial innovation and technology revolution to make progress | | | | | |
|--|--|--|--|--|--|

5. Conclusion

Thus, in China, technological innovation is vital to China's financial development. And not just in China. For countries around the world advanced technology can be very good to promote the economic and financial development.

After all of the above investigation, research and summary, I found that in high speed development period in China, the progress of technology and economy are very big, but still need to draw lessons from foreign advanced technology more advanced.

At the same time, in the design, I also found many of myself shortcomings. Initially left a lot of detours, without a complete understanding of survey method, consider not very comprehensive, so run into many difficulties. Second, at first I will not use SPSS

Such as computer software, this exercise makes me progress is very big, and I think we should constantly improve their survey data and the ability to use computer software.

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