



Research Article

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The influence of economic globalization on Chinese provinces based on the numerical analysis

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ABSTRACT

Economic globalization is a trend of world economic development. Economic globalization is an irresistible trend of history. Its influence is various to our country. In this paper, we analyze the positive influence and negative influence of economic globalization to our country economy based on the numerical analysis. Economic globalization is a topic of current talk. But whatever the answer, people can't deny that this is a basic fact. Economic globalization has become an irreversible trend and irresistible objective reality. It is booming in recent years. It brings comprehensive profound influence to the world. President Jiang Zemin has pointed out: "We must know about globalization problem correctly." In this study, we will briefly discuss its impact on the economy of our country.

Key words: Economic globalization, Numerical analysis, Influence, Economy

INTRODUCTION

Practice has proved that the historical trend of economic globalization is unstoppable. In that case, it requires that we should take a positive attitude to join the process to meet the challenges of economic globalization. It requires us that we must dialectical and comprehensive understanding the relationship of economic globalization and China's economy [1-5]. We should not only fully see the positive influence of economy globalization, take an active part in international cooperation, but also clearly aware the negative impact to minimize risk [6-9]. Now we expound the problem. We often solve complex engineering problems with the numerical analysis method. Then, we can obtain approximate solutions of the problem.

THE RELEVANT THEORIES OF NUMERICAL ANALYSIS

The Types of Numerical Analysis Technology

a. **Finite difference method.** It is based on the basis of the classical mathematical approximation theory. It is easy for people to understand and accept. It is not convenient to handle the edge shape of complex fluid area. It will affect the calculation accuracy if we deal badly [10-14].

b. **The finite element method.** There is no special restrictions to unit subdivision of the solving the area. So it is especially suitable for processing the complex boundary area.

c. **The boundary element method.** The dimension of solving the problem reduce and the workload of calculation reduce. It can easily deal with unbounded region problem. The precision of the boundary element method generally higher than that of the finite element method. But the coefficient matrix of boundary element equations is asymmetric full matrix. So this method is only applicable to linear problem at present.

d. **Finite volume method.** Finite volume method emphatically construct the discrete equations from a physical point. Each discrete equation is physical expression limited the size of the volume. Derivation process is clear physical

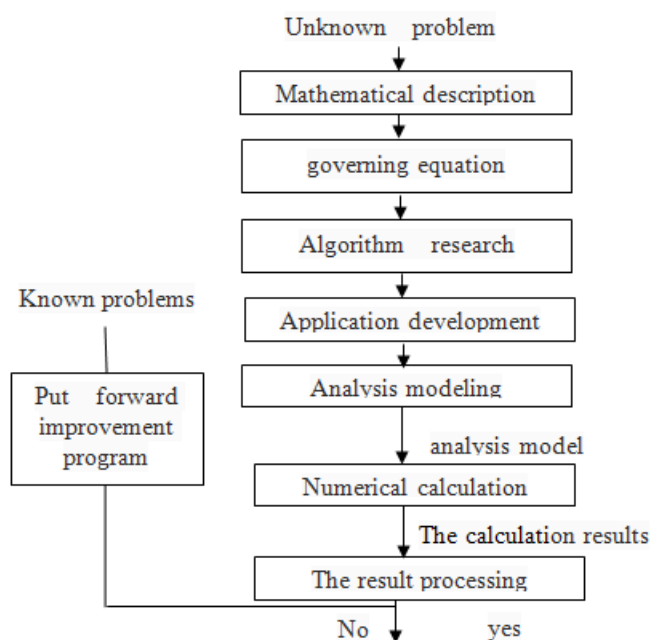
concept. The discrete equation coefficient has certain physical meaning. It can guarantee the discrete equations with the conservation properties. But it's inconvenience to analyze the mathematical characteristics of discrete equation.

e. **Finite analysis method.** Finite analysis solution is continuously differentiable in the local area of each node. It has high precision. The finite analysis method has the properties of automatic wind. There is no distortion problem of the numerical oscillation.

The Application of the Numerical Analysis Technology

Numerical analysis technology applied to the practical problem must be experienced the following process in Table 1.

Table 1: The application process



THE REASON OF ECONOMIC GLOBALIZATION DEVELOPMENT IN THE 1990S

Traced back to the process of economic globalization, discovered the new world of Columbus is its start. The outbreak of the second world war in the 1930s forms the interconnected world economy and the growing trend of interdependence reinforced. In the 1990s, economic globalization has become a trend. The economy is accelerated development. The accelerated development must have reasons, the author thinks that there are mainly the following aspects:

The International Situation is Thawing. All countries in the world regard economic development as the central task. They join in the international market actively, the contacts between the countries around the world have reinforced. After the end of Cold War, great changes have taken place in the world situation. The international situation tends to ease. The maintenance of world peace and promoting economic development become a theme of The Times. All countries in the world implement a positive economic policy. We should speed up the industrial structure adjustment. The economic development becomes the central task. They are committed to the improvement of comprehensive national strength. In order to take one long, fill yourself short, all countries take part in the international economic environment with a positive attitude. The links between the countries strengthen. Coordination and competition coexist. Resource flows around the world. In a larger extent, the resource achieve the efficient allocation. Thus, it promote the economic ties and exchanges around the world. The globalization process speeds up.

The Ever-changing High-tech is the Premise and Foundation of the Economic Globalization Rapid Development. The rapid development of modern science and technology, it can transform into productivity and realize the economic benefits. At the same time, the time becomes shorter and shorter. The science and technology play an important role in economic growth. Especially with the common application of electronic computers, the communications and transportation modernization, they make the contact of the world economy closer. Modern technology has increasingly become the material basis of promotion the economic globalization rapid development.

Practice has proved, science and technology progress is the source and motivation of the world economy growth and extension. It is the root cause of the economic globalization and rapid development.

Rapid Expansion of Multinational Companies is the Dominant Force in the Economic Globalization. The 97 investment report data suggest that the world has 44000 the parent company of multinational company and 280000 subsidiaries and affiliated companies in foreign countries. They form a vast global production and sales system. These multinational companies control about a third of the world's production. They master the 70% of the world's direct investment, two-thirds of the world trade and more than 70% of the patents and other technology transfer, because the production and marketing of multinational companies are accrossing borders and regions. It is a worldwide on the implementation of optimal resources allocation and the combination of production factors, so as to greatly promote the further development of economic globalization. And multinational company itself also becomes a dominant force and main carrier of economic globalization.

The Liquid International Capital is Extremely Strong Driving Force of the Economic Globalization Rapid Development. Along with the progress of science and technology, the emergence of the emerging industrial sectors, in order to accelerate the development of its economy, improve the country's international competitiveness, the vast majority of countries in the world have introduced preferential policies to attract foreign capital. At the same time, profit-seeking capital nature also makes capital liquidity. So the international capital expand exponentially. It forms the world's financial system. This international globalization of contemporary capital is the world's economy rapid globalization boosters. This will help to optimize allocation of capital around the world. This promote the development of world economy and trade and accelerate the process of economic globalization.

THE INFLUENCE OF ECONOMIC GLOBALIZATION ON OUR COUNTRY'S ECONOMY

Practice has proved that the historical trend of economic globalization is unstoppable. In that case, it requires that we should take a positive attitude to join the process to meet the challenges of economic globalization. It requires us that we must dialectical and comprehensive understanding the relationship of economic globalization and China's economy. We should not only fully see the positive influence of economy globalization, take an active part in international cooperation, but also clearly aware the negative impact to minimize risk. Now we expound the problem.

The Positive Impact of Economic Globalization.

a. Economic globalization is beneficial to attract foreign investment in China. It can make up for the inadequacy of domestic construction funds. Economic globalization makes the capital flow internationalization. The mutual investment between countries is increasing frequent. We can take advantage of the favorable international situation, make full use of the capital, technology, management experience and high-quality talent through foreign companies' investment especially multinational companies. Finally, the economy of our country develops rapidly. By the end of 1997, in the world's top 500 largest multinational companies, there are more than 200 companies come to China to invest." In our country the actual use of foreign capital is \$280 billion in the period of the ninth five-year. On the one hand, it makes up for the lack of construction funds in our country through attracting foreign investment. On the other hand, it is also helpful to introduce foreign advanced science, technology and management experience for our country.

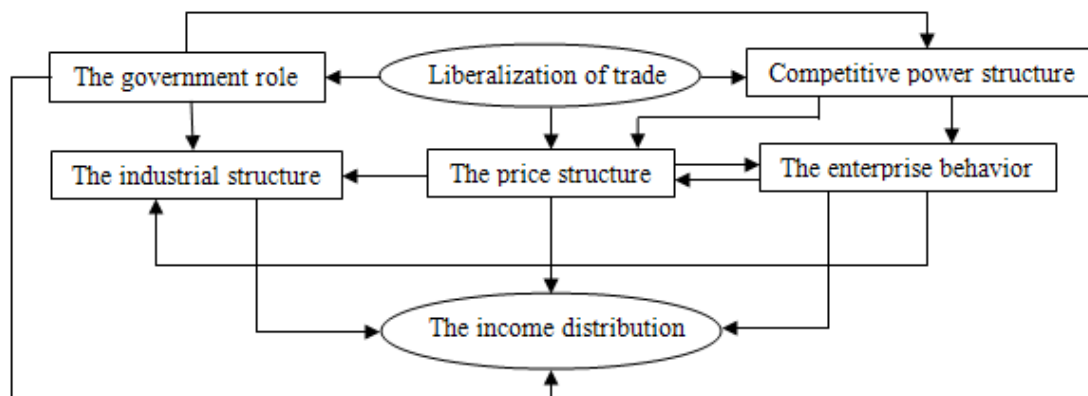
b. Economic globalization has accelerated the pace of China's industrial structure adjustment. Economic globalization accelerates the process of industrial structure adjustment around the world. Countries all over the world especially in developed countries are stepping up to industrial structure adjustment. We should take advantage of this opportunity, constantly adjust and optimize industrial structure according to the needs of the market. We should adjust the processing industry, such as traditional textile, coal, metallurgy, machinery and so on. We should improve the high technology industry in the proportion of the national economy. Especially, the current must vigorously promote technological progress. Through equipment updating and technology import, we improve the skill level of pillar industry and leading industry. Gradually narrow the gap of existing technology with the developed countries. We can realize the leap-forward development of the technology in our country with the trend of economic globalization.

c. Economic globalization is beneficial to make high-tech industry become a pillar industry of our country. It can lead to the development of national economy departments. It is a new economic growth point. With the rapid development of high-tech, it provided the impetus support for economic globalization. The opening of the global Internet provide a convenient conditions for our country to make full use of international information resources and technology. The rise of information economy, on the one hand, it greatly promote the global production and consumption. On the other hand, it also lead to the rapid development of the world information technology industry. In the global information industry, information technology and information industry of our country also got great

development. Our government has taken the information industry as the foundation of the national economy. And it will lead to the development of other industries, become a new economy growth point in our country.

d. Economic globalization is beneficial to our country. It can promote the development of foreign trade. The rapid development of economic globalization, we should weaken the trade barriers and provide more favorable environment for the world trade smooth development. Although the technology is outdated and the funds is lack in our country in general, as a human resource power, we can give full play to the advantages of human resources in our country. We can develop the labor-intensive industries of developed countries advanced technology. We can continuously extend the shares of daily consumer goods in the international market. So you can play advantage, foster strengths and circumvent weaknesses. The influence path of trade on income distribution is shown in table 2.

Table 2: The influence path of trade on income distribution



THE NEGATIVE IMPACT OF ECONOMIC GLOBALIZATION ON OUR COUNTRY'S ECONOMY

Economic Globalization put forward Severe Challenges to our Country's Economic Development. Today's economic globalization is formed and developed under the condition of the old international economic order. It is on the premise of not equal competition. It reflects and represents the will and interests of the developed countries follows the competition principle of "law of the jungle". Compared with the developed countries, the overall level of economic development is still very low. On the whole, especially the developed countries is in the active status in the field of leading industries and high-tech. The developing countries and developed countries is in unequal status in the international competition. The developing countries had to passive subordinate status in the reality international competition. In the process of economic globalization, developed countries are the biggest beneficiaries. The hit and damage is obvious suffered by the developing countries. As the biggest developing country, China's impact and losses are inevitable. To some extent, these restrictive factors will pose a threat to the economic development of our country. They will face severe challenges.

Economic Globalization Makes the Economic Security of our Country under Threat. Because the developed countries have the advantage in capital, technology, management, talents, trade, finance and other aspects. The developed countries use its mature market economy operation way in the process of economic globalization advance. They use the power of the world market, and multinational companies are the carriers. In order to maintain their own interests, developed countries are often at the expense of the interests of developing countries. They implement restrictions and sanctions to developing countries. They manufacture frictions in trade and intellectual property rights with all sorts of excuses. Due to the weak economy strength, low development level, developing countries are in a weak position in the fierce international competition. In terms of our country, a domestic industry, market, resources, environment, science and technology are faced with the challenge of developed countries in different degrees. And the biggest impact is the national industry of our country. This is not only for national industry is the core issue of economic security in our country, but because our country's national industry overall strength is not strong, the technology level is low, the competitiveness is not strong. So they will be washed out by foreign multinational companies which threaten the economic security of our country. So we should further study the safety of the national industry in our country.

The New Situation, New Problems Appeared in the Process of Development Make our Country faced with Challenges in Participating in the Economic Globalization. Economic globalization is the world trend of historical development. We passively accept, not as good as actively participate. Therefore, China implement reform and opening up and take an active part in international cooperation and competition. We participate in the globalization competition of economic development with a positive attitude. And we have achieved remarkable

tremendous achievements. But there are a lot of new arising problems to be solved in the course of development. First of all, our country is facing economic transition from planned economy to market economy, from extensive management to intensive management change. These are likely to cause the temporary difficulties of economic development in China. Secondly, the employment pressure of our country is serious, part of people are out of work. Our country's social security mechanism is not sound. It will affect the economic development of China. Table 3 shows the change of employee salary in the east, middle and west.

Table 3: The change of employee salary in the east, middle and west

Region	In 1978	In 1985	In 1990	In 1995	In 2001
In the east	599	1205	2336	6372	13120
In the middle	615	1052	1888	4453	8461
In the west	696	1328	2314	5276	11082

CONCLUSION

Economic globalization is a necessary link in the process of the human modernization. Before the age of economic globalization trend, our country can not stand idly, we can't isolate because of the negative impact of economic globalization to our country economy. It requires us to avoid disadvantages, choose reasonably, seize the opportunity, handle actively. On the one hand, we actively participate in international economic cooperation and competition. On the other we must develop the economy, promote the adjustment of industrial structure, enhance the government's macro-control ability and control ability, improve the comprehensive national strength in order to get the opportunities brought about by economic globalization. At last, we make our country gain the initiative in the process of economic globalization.

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