

Economic Influence Analysis of Offshore Outsourcing Based on Host Country's View

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Abstract

The economic influence is analyzed in this paper, the influence is classified into positive ones and negative ones. Economic influence is regarded as an index to represent how much the influence could be helpful to the host country. Positive and negative influence on offshore outsourcing is studied and a model based on system dynamic is built to help the host country to develop outsourcing strategy.

Keywords: *Outsourcing, Economic Influence, Industrial transfer, System dynamic*

1. Introduction

The rapid development of information technology and the revolution of communication technology are driving the global economy to further development, which to a great extent change the non-tradable service. The transformation from non-trade ability to trade ability promotes the new industry of service outsourcing to step on the historical stage [1]. As an important part of modern service industry, service outsourcing with the features of high added value, low consummation, less pollution and intensive employment has become the new point of growth of the economic development in the new round of the worldwide industry structural readjustment. As the latest formation of the international service product and the division of labor, the contemporary service outsourcing has a huge impact on every country's service trade, industrial structure, upgrade industries, value chain promotion and so on, which makes many academicians consider that offshore service outsourcing industry as new outer-oriented economy industry has an influence on nation economy [2].

2. The Positive Influence

It began in 1960s that the developed countries divided the work into manufacturing outsourcing which was led by the upgrade of industrial structure and the promotion of competitive ability which played an important role in manufacturing industry undertaking countries, such as Asian "Tigers" as well as the Chinese economic strategy transition. In the process of the new round of the worldwide industrial structure, the influence of offshore outsourcing on undertaking nation economic development strategy apparently increases. Offshore outsourcing undertaking countries have some impacts include consolidating the country economic strength, improving the welfare level, optimizing industrial structure, creating high employment rate and so on. Concrete analysis is as following:

2.1. Create More Employment Opportunities

The undertaking of offshore service outsourcing is beneficial to using the abundant and cheap labor resource in developing countries, at the same time, because of the employment increase of service outsourcing industry; it can offer amounts of employment opportunities for service outsourcing undertaking countries. The World Bank thinks "if it is feasible that long distance survive can be applied, and it can reduce commercial cost by 30 percent to 40 percent, 1-5% employment stations in G-7 countries will turn to the developing countries with undertaking outsourcing service." A recently study shows that the potential service outsourcing in America will provide at most 14 million jobs to the countries with undertaking services [3]. Only in the finance service industry, the service outsourcing provides about 2 million opportunities to the host country. Employment expansion effect of service outsourcing can be concentrated in India. The data from Indian software and service industry association shows that, the boom of service in offshore outsourcing makes the quantity of employment in service industry increase to 1.3 million in the annual 2005-2006 from 280 thousand in the annual 1999-2000. Besides the millions of direct labors, the ascending of income of those white collars who take up the jobs also stimulates their needs in clothing, food, shelter, transportation, entertainment, health and so on, which leads other industries' three million jobs [4]. These jobs include electric communication, energy resources, construction, facility management, and transportation, foodservice and so on. Professional talent reserve, the level of foreign language and salary level would affect the situation of creating employment opportunity. To gain more profit, the service providers need to keep focus on the high value added products which might need a large amount professional talent reserve. As the clients of offshore outsourcing are mostly foreigners, the level of foreign language is very important for the talents who are willing to work in this area. Salary level is a key factor to attract excellent person, and high salary level would be also helpful to create more employ opportunities.

2.2. Optimizing Industry Structure

Offshore service outsourcing rose in the field of manufacturing in the 1980s. Until the 1990s with lots of transformation of transnational corporations manufacturing to the developing countries, many developing countries took up OME productive activities for the developed countries, the global manufacturing outsourcing came to a climax. Since the century, accompanied with a multinational manufacturing outsourcing scale continuing to expand, the demand for manufacturing a supporting role of producer services increase, therefore there are lots of offshore transformation in the service industry. At the same time, the developing countries have been opening to the outside world, upgrading industry structure constantly, promoting the level of human resources and improving the open environment during many years which result a new round of outsourcing wave which is known as global service industry offshore outsourcing [5]. It is different from the manufacturing which began in 1980s; the positioning of value chain in the service outsourcing at this stage is more flexible. The initial service outsourcing undertaking is mainly on low-end services such as data entry, basic programming, the low technical content and low value-added products are in a lower place in the value chain. With the corporation time and the client increasing, many outsourcing projects of outsourcing companies are developing towards high added value services, such as marketing research, finding out the data, software design, products design, tax collection, drug effects analysis, building design and so on. With the further development of offshore outsourcing, it will undertake the financing, insurance, consulting, information and knowledge-intensive industries that have far-reaching effects and positive role in

promoting. Business technology content, the value chain position and innovation would affect the extent of optimizing industry structure. High technology content is helpful to optimize industry structure, because high quality industry structure always has high technology content. The position at value chain also affects the result of optimizing industry structure, and innovation is a positive way to keep outsourcing service at a high position in the value chain.

2.3. Technological Spillovers Effect

Technological Spillovers in literature is interpreted to: multinationals of technology, pressure valve, management experience, and human capital, intangible assets through provided technology, and established subsidiaries and other various channel to host non-voluntary sexual to proliferation, and promotion has local technology progress and economic growth, but multinationals cannot be obtained any return and proceeds of acts. Technology spillover is an expression of economic externalities, and this phenomenon is primarily transnational corporation from developing countries brought about by the industrial transfer [6]. Dynamic process of technological spillover is integration, both imported machinery and equipment, intermediate goods and hardware, such as spills from technology transfer, technical consulting services, technical training, management skills and soft skills, entrepreneurship development of osmosis and diffusion. Along with the development of offshore outsourcing, outsourcing of technology spillover effect of the undertaking is bound to be more or less. The effect of outsourcing technology spillover can be summed up in the following areas:

2.3.1. Staff Training: In the offshore service outsourcing, in order to make sure that the staffs can meet the requirements of awarding business on quality standard, management standard, technique target and so on, the awarding business needs to have a set of training to some related staff. This kind of training directly improves the staff's technology quality and management quality, which have created outstanding talent teams for the understanding countries and other local land to develop epiboly industry. The study made by Ngo Vanlong (2005) has shown that the technology effect which the offshore service outsourcing bring outsourcing undertaking countries with originated mainly from the training that awarding business do to the low wage country staffs.

2.3.2. Learning by Practice: Local outsourcing enterprises have been learning constantly through undertaking offshore service outsourcing, they accelerate to absorb the advanced technology in developed countries and improve their independent innovation ability. Especially the smaller technology among the local business is, the stronger the learning ability will be and the bigger the technology spillover effect will have, too. The learning curve proposed by Kruman (1998) points out that the more cumulative output of a country industry, the lower the unit cost will be. A country with abundant experience in a particular industry will possess lower the effects can bring proof of the dynamic gains.

2.3.3. Market Development: Because the client is often in advanced management and marketing client enterprises, multinational contracting enterprises entered the outsourcing undertaking market development, but also for the outsourcing undertaking outsourcing companies to provide international market operational model and improve outsourcing's ability to undertake domestic companies to explore the international market.

2.3.4. The Flow of Talented People: To undertake offshore service outsourcing talents is an important way to create technology spillovers. On one hand, outsourcing offshore outsourcing

company in order to undertake and successfully complete, tend to employ certain foreign advanced technical and management staff, enabling local outsourcing company technology management level to improve. On the other hand, as for foreign companies, they are in order to undertake the business, and then a lot of employing local engineers, architects, and senior management, these local employees will have the opportunity to be exposed to international development of advanced technology and ideas, and to access to the knowledge and management skills in industry needs.

2.3.5. Competition: Multinationals in technology also brings competition, because multinationals relying on advanced technology improve have market share, and local enterprise cause market competition pressure, forced local enterprise constantly improve technology, products structure, products quality, autonomous innovation capacity, and multinationals of competition capacity, and multinationals face local enterprise competition more fiercely, to keep competition advantage, in contract of while will to received package Enterprise brings more of technology spills. The faster absorption and innovation of Local business are promoted by technology. Visible technology spillovers in competitive conditions are more likely to occur.

2.3.6. Industry associations: The design, development, financial, logistics, marketing, data processing, extensive development of producer services are the support of manufacturing core technology and the key elements of multinational companies to enter local markets, through the industry forward and backward linkage effects of the spread of technology. A flagship of the multinational companies enter, due to the effect of industrial clusters which will rapidly produce a lot of compatible with emerging local industry clusters and industrial chain. Local outsourcing companies by contracting companies to undertake service outsourcing acquired knowledge to a large number of local manufacturing industry services promoted by the local manufacturing sector improvement, and lead the overall upgrading of industrial structure.

2.4. Energy-saving Emission Reduction, the Promotion of Sustainable Development

Since reform and opening up, with the cost advantages of human resources, vigorous development of the "processing" of labor-intensive industry [7]. Highlight of height development of manufacturing industry in China has become the world's development and engine. China grows to manufacturing centers in the world, known as the "workshop of the world" and "made in China" because of its great energy consumption and serious environmental pollution, low value-added has brought a severe problem. Environmental pollution has been particularly severe problem, and concentration of air pollution in some major cities in China with an average annual value far exceeds international standards among the most polluted cities in the world. The main factor was the rapid growth in the manufacturing sector triggered by the sharp rise in energy consumption, as well as energy efficiency and energy emissions standards are too low. In recent 40% the rivers are heavily polluted, almost one-third of agricultural irrigation water is not eligible, 90% urban groundwater has been contaminated [8]. In some areas and watershed, water pollution has apparently rendered from the tributaries to the river source, spreading from cities to rural areas, from surface to underground infiltration, from land to ocean development trends. Sewage disposal is a major cause of water pollution in the manufacturing sector. Visible as the factory of the world, bring certain economic benefits at the same time, the negative effects are not to be overlooked.

3. The Negative Influence

The negative influence is regarded as the factors which could decrease the economic influence of offshore outsourcing.

3.1. Service Provider could be locked at the Lower Position of the Chain

Professor Chen Zhiwu from Yale University makes use of "selling hard menial jobs" to depict the Chinese offshore outsourcing: "consumption of non-renewable resources pollutes the environment and source of 'dumping' notoriety, only keep low profit" [9].

The client always outsource the non-core business with low value-added, the service provider would be more and more rely on the clients, since the lack of independent intellectual property rights. Due to the effect of path dependence and mindset, when outsourcing companies makes the leap to the value chain while getting greater value added, the resistance will be very large. Therefore, efforts must strengthen the outsourcing and move up the value chain, high-end business process capabilities, to avoid being locked in for a long time down the chain. To get rid of a long period of plight of lower-end of the value chain, outsourcing of many services to undertake major industrial upgrading at trying to jump in the value chain. United States Business Week has published an article saying, India outsourcing company initially refused to accept the call center business of multinational corporations in Europe and America, and the main reason comes from two aspects. Firstly, as global competition increasing, European and American corporate customers for their own interests, so they try to push down prices of call center outsourcing business. Secondly, India has already started to shortages set in, rapid increasing in the cost of labor, undertake outsourcing India company felt the call center business's profitability and become smaller and smaller. Also, for many years to undertake the outsourcing experience in India Company, now it has the ability to take on more complex business, and they would prefer to take the mortgage loans, insurance payments to business processes such as order, to complete the jumps in the value chain. The lower position at the chain, the fewer business value added is gained by the service provider. As the client only outsource the non-core business, the service provider is more likely to be locked at the lower position of the chain. Sometimes, the service providers are limited by their own technical levels, so they can only choose the outsourcing work with low value added. There are also some service providers who give up the chance to take advantages since they could gain enough profit at the moment because of low cost of human resources.

3.2. Outsourcing Service Provider is not Conducive to Innovate

On a global scale, major offshore outsourcing undertakes the location value chain is not the same, but its real is surprisingly similar---imitation than innovation. Innovation is the life of enterprise, and enterprise is to survive, which is necessary to constantly adapt to change in the environment to adapt not only a passive adaptation, adaptation and innovation is the best. Today market is increasingly competitive, and a company has an advantage of not very long. Only advantages through continuous expansion and accumulation can continue to survive and develop.

Undertake service outsourcing work is to do what someone else wants you to do the work, and work under the guidance of others is not true innovation. More frightening is the outsourcing of many services to undertake. Businessmen have been willing to play that without independent brands, free of core technologies and intellectual properties "three noes" enterprise. Weiwoke-Baoluo, head of Weipuluo science as India software giant said: "for engineers, to discover and find people that can do variously and widely, this distinction is the

difference between service and manufacturing industries. In the service sector, we do a good job to some extent, this work was done at the behest of others. "Service outsourcing enterprises to undertake only focus on short-term economic benefits and, under the global wave of commercial cleaning cannot be guaranteed forever, "alone". Economic benefits in the short term after completion of certain capital accumulation only will focus in research and development and innovation, to make the enterprises bigger and stronger. Under the impact of the financial crisis, the Yangtze River Delta, an export-oriented economy in the Pearl River Delta enterprises polarization has been evident, and brands and intellectual property company rapid recovery after the financial crisis hit, and "three noes" businesses have closed down. Visibly, arising from offshore outsourcing baffle needed by the outsourcing enterprise values of innovation, and strive for break the breakthrough of the baffle. Innovation enthusiasm, innovation ability and government support would affect innovation of service provider. Innovation enthusiasm represents the degree of willing to innovate, and high innovation enthusiasm means a strong willing to innovate. Innovation ability represents how likely the service provider could innovate. Because innovation always costs quite a lot, it is a heavy burden for the service provider business to innovate without government support, especially for small enterprises. Government support includes financial supports and policy supports. Financial support is to provide financial incentives for enterprise, and policy support is to provide a special kind of award which allows the innovation enterprise to gain competitive advantages.

3.3. Export-Oriented Economy Lead to Structural Vulnerability

An export-oriented economy is one country or region to promote economic development and growth in the country or region, to demand on the international market-oriented, to expand exports as the Center, according to the principle of comparative advantage, actively participating in international division of labor and the international competition, established by the economic structure and economic operation mechanism and economic operation system. Offshore outsourcing is an export-oriented economy based on export services, subject to certain developed dramatic service outsourcing contract awarding State fluctuations of the business cycle, excessive reliance on exports will cause economic structural vulnerability, when the economic crisis caused economic stagnation or even recession, and other serious consequences. Since 2008, began in the United States and quickly spread to the global financial crisis has spread from the virtual economy to the real economy. In the end of 2008, the impact of global financial crisis on China's economy and society is deepening and spreading: the impact on China's export-oriented enterprises continued to deepen, South-Eastern region a large number of services outsourced to undertake corporate orders continued to decrease, not able to order business more and more. Extending from the virtual economy to the real economy extended by South Coast East to the Central and Western inland areas. Due to the excessive reliance on exports as a result of the economic structural fragility has been naked in front of us. High proportion of export-oriented economy would lead to more serious structural vulnerability, changes in exchange rates and external markets could affect export-oriented economy. Domestic consumption, investment and export are three engines which drive the national economy. High domestic consumption capacity could weaken the negative affection of export-oriented economy.

All the factors of both positive and negative influence are shown in the Table 1.

4. Model of Economic Influence on Offshore Outsourcing

A system dynamic model is built to analyze the economy influence on offshore outsourcing, because the economy influence on offshore outsourcing is shown as a long-term and cyclical complex system with Insufficient data, a system dynamic model is suitable to deal with it.

4.1. Determination of the Boundaries of the System

The system boundary is determined as both the positive and negative influence of offshore outsourcing industry, and all the factors that would affect the economic influence such as salary level, innovation, government support, technical level and so on.

Table 1. Factors of Economic Influence

Economic Influence of Offshore Outsourcing	Positive Influence	Create more employment opportunities	Professional talent reserve
			The level of foreign language
			Salary level
		Optimizing industry structure	Business technology content
			The value chain position
			Innovation
		Technological Spillovers Effect	Learning ability
			Staff training
			Industry associations
	Negative Influence	Service provider could be locked at the lower position of the chain	Flow of talented people
			Business value added
			Core business
		Outsourcing service provider is not conducive to innovate	Technical level
			Cost of human resources
			Innovation enthusiasm
Export-oriented economy lead to structural vulnerability	Government support	Innovation ability	
		Export-oriented economy proportion	
			Domestic consumption capacity

4.2. Causal Relationship Diagram

Causal relationship diagram of economy influence of offshore outsourcing is shown in Figure 1. In this paper, economy influence of offshore outsourcing is represented as a “good” index, as the index grows the economy influence is more and more beneficial. Economy influence of offshore outsourcing could be increased by positive influence which is affected by creating more employment opportunities, optimizing industry structure and technological spillovers effect. Economy influence of offshore outsourcing could be decreased by negative influence which includes “service provider could be locked at the lower position of the chain”, “outsourcing service provider is not conducive to innovate” and “export-oriented economy lead to structural vulnerability”. There are two circles in this causal relationship diagram, economy influence of offshore outsourcing could increase vendor enthusiasm which means the service providers are willing to accept more outsourcing contracts, then high vendor enthusiasm could either increase positive influence or increase structural vulnerability which could increase negative influence.

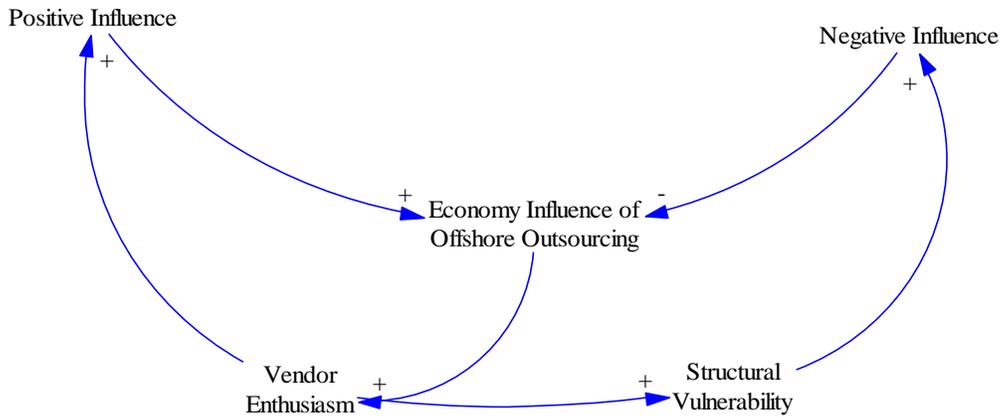


Figure 1. Causal Relationship Diagram

4.3. System Dynamic Model

System Dynamics is a systematic approach combined of qualitative and quantitative to deal with complex issues, it combines the feedback control theory, information theory, systems theory, decision theory, computer simulation, and system analysis method [9]. Only the basic structure is shown in Figure 1, it is impossible to tell the distinction of the different nature of variable. It is necessary to use the flow graph to create a complete system dynamics model. By refining the causality of economy influence of offshore outsourcing and introducing the characterization indicators of the main variables, economy influence of offshore outsourcing model based on system dynamics is built shown as Figure 2.

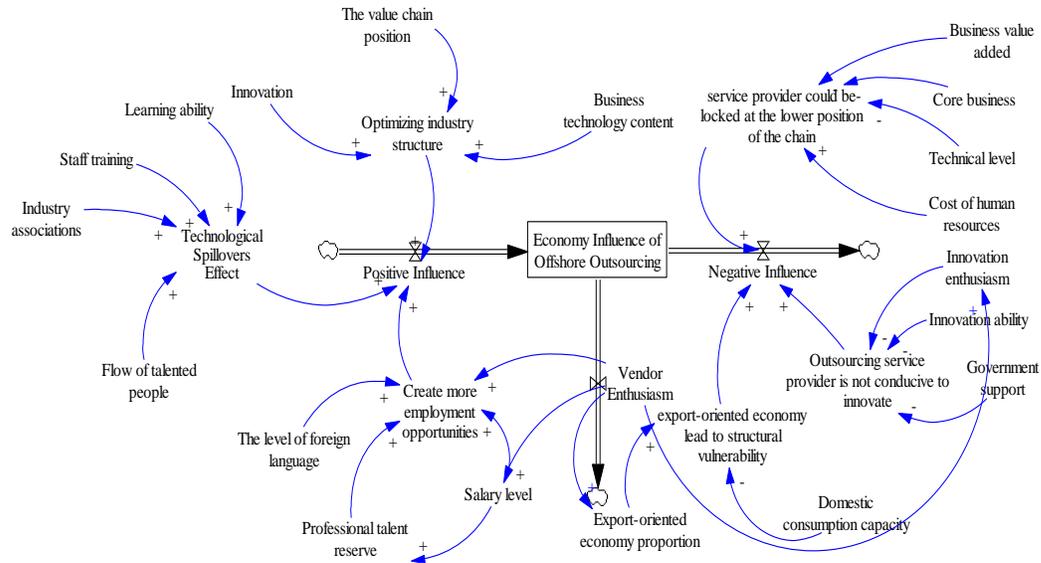


Figure 2. Flow Graph of System Dynamic Model

Economy influence of offshore outsourcing is represented as state variable, positive influence, negative influence and vendor enthusiasm are represented as rate variable, and the others are auxiliary variables and exogenous variables. Positive influence could increase economy influence of offshore outsourcing; negative influence and vendor enthusiasm could decrease economy influence of offshore outsourcing. Vendor could increase employ

opportunities directly or by increasing salary level, it also could increase export-oriented economy proportion and innovation enthusiasm because a encouraged service provider is willing to innovate more and take more outsourcing service contracts. So, vendor enthusiasm could both increase economy influence of offshore outsourcing by increasing positive influence and decrease the negative influence and decrease economy influence of offshore outsourcing directly. Salary level could increase employ opportunities directly or by increasing professional talent reserve, because high salary level is attractive to both the employee and the students who is potential employee in a future. As a kind of positive influence, technological spillovers effect could be increased by learning ability, staff training, industry associations and flow of talented people. Great learning ability of the service provider means the vendor could learn more technology by performing the outsourcing project, good staff training is a basis to provide learning ability, close industry associations could make the learning much easier, flow of talented people provides a chance for the employee to communicate with each other and broaden their horizon.

5. Conclusion and Suggestions

Offshore outsourcing as later forms of the International Service Division of production and has been widely concerned. As an industry training strategies, more and more developing countries to realize the development the enormous potential of offshore outsourcing on economic promotion and actively take the initiative to undertake the transfer of international service outsourcing, and strive to enhance their position in the international division of service outsourcing industry chain. At this point, should be clear recognition of offshore outsourcing on the economic impact of the outsourcing undertaking and weaknesses. Benefit of offshore outsourcing that new industries bring great economic benefits to the country at the same time, avoiding its risks. Using offshore outsourcing this emerging industry is accumulating enough capital and technology, intensive research and development and innovation leap into the value chain. For this analysis, we recommend the following:

5.1. Step up Publicity, and Let the World know "China"

In November 2009, the Ministry of Commerce in United States CNN television prime-time put on Chinese-made advertising, a brilliantly conceived ad for "made in China, make with the world" received good results, and once again, we see the power of publicity. At present, however, we outsourced publicity still much to be desired. To develop service outsourcing, more famous multinationals in China outsourcing companies, learn about our outsourcing policy, understanding the advantages and strengths of our country and, therefore, should further strengthen publicity to make the world know China's service outsourcing.

5.2. Use of Technology Spillovers, Gain Advanced Experiences

In offshore outsourcing of multinational companies take their business to the successful completion of their outsourcing projects usually by organizing a series of related training or directly sending managers to the outsourcing team. In the course of training and cooperation of technology spillover is inevitable, as undertaking will take this opportunity to learn the best management practices of multinational, which enhance their level of project management, fit employer needs.

5.3. Emphasize the Moderate Development, both Growth and Adjusting Economic Structure

Financial crisis to China's rapidly growing economy has sent a signal that purely export-oriented economy in the development process does not have the capacity to resist the international financial crisis. Offshore outsourcing services bring handsome profits to enterprises in China at the same time, also planted a hidden danger. Therefore, the development of service outsourcing industry in addition to maintaining growth to restructuring, and moderate development of offshore outsourcing services as well as access to their customers, and corresponding development in offshore outsourcing.

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