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FDI and manufacturing industry in Asia

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Abstract

The study finds that China's manufacturing still maintained a growth level from 2003 to 2013. However, the growth has been declining. The rapid development of ASEAN economies led to the rise of the emerging manufacturing countries which have slowly adjusted and found their own advantages in challenging China.
The main conclusions of this paper are twofold. First, China will soon lose her low labor cost competitive advantage and needs to look for new strategy or industrial upgrades. Second, the current pattern of international division of labor will last for a fairly long period that developing countries will continue to serve as processing base for developed countries.

Key Words: FDI; labor productivity cost; labor productivity; average salary cost; competitive advantages

1. Foreign Direct Investment in the World Economy

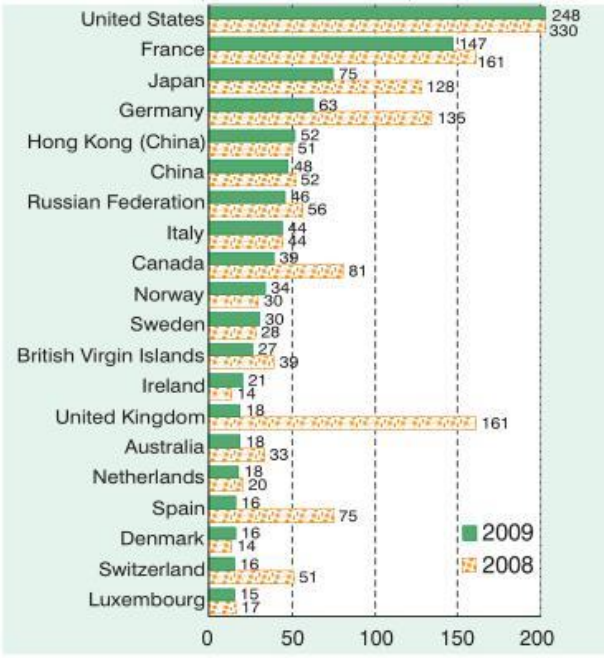
1.1. Source, Trend and Direction of FDI

1.1.1. The source of FDI

Foreign Direct Investment blew up around WWII, especially in developed countries like America, Britain, France, German and Japan. During the end of the 20th century to early 21st century, for example in 2008 and 2009, these five countries covered about more than 60% of FDI outflows[7](see Figure 1.1). It's easy to understand that these countries had large dominance on economy, so they have capital to fight against other countries with more energy resources.

Figure 1.1

Global FDI outflows, top 20 home economies 2008-2009 ($ billions)



Source: UNCTAD, based on annex table 1 and the FDI/TNC database (http://www.unctad.org/fdistatistics).

1.1.2. The trend of FDI

The current trend of FDI is different from three decades ago, which viewed a remarkable increase in both flow and stock of FDI. After 2008 global financial crisis, the outflow of FDI returned under 2 trillion dollar, around 1.1 trillion in 2009[8]. Although the flow of FDI accelerated faster than the growth in world trade and world output, we should think over the trend in the near future, especially in present few years the real economy has not performedwell. Rating organizations like Moody's and S&P gave negative watch and negative outlooks to Asian countries, and downgraded the Hong Kong and China ratings to AAA and AA- on 31st march 2016[9], so it directly affects stock of FDI in China. Investors don't hold postive attitudes like a bullish investment in China, instead pushing assets into other more cheaper cost places in Asian countries.

[7] Constructed from data in United Nations, World Investment Report, various editions,*(http://unctad.org/)*

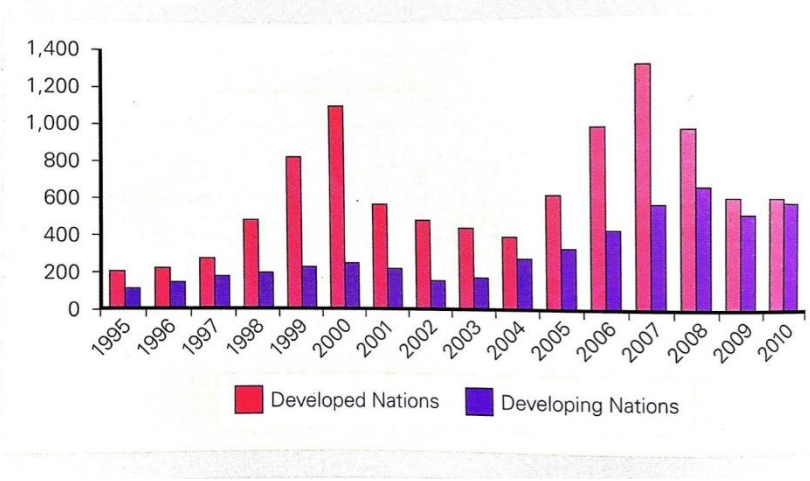
[8] Collected from data on World bank *(www.worldbank.org.cn)*

[9] Quoted from S&P and Moody,*(http://www.standardandpoors.com/)(https://www.moodys.com/)*

1.1.3. The direction of FDI

The direction of FDI decides the flourishing market. In the 1990s, the Worldsaw the development in China, whichattracted an inflow of FDI. In general, most FDI not only went through developing countries like China, but also directed at the development nations of the world as firms based in advanced countries invested in the others' markets [10] (see Figure 1.2). It seems that developing countries which have more opportunties to attract investors.But the truth is that developed countries have well-established regulation and security. Even though developed nations still account for the largest share of FDI inflows, FDI into developing nations has increased greatly (see Figure 1.2 as well). In the same time, America went through global finance crisis, which heated a lot and gave time for Asian countries to keep pace with. During 2003 to 2010, it's easy to find out that inflows of developing countries were more and more closer to developed countries. Driving much of the increase has been the growing power in China, which attacted about 60 billion dollar FDI in 2004, and it continued to rise to 101 billion dollar in 2010[11]. Whether the powerful trend of China can attract as much as inflows of FDI in near future, under the continued appreciation of the RMB, energy-saving emission reduction requirements, export policy adjustments, "labor contract law" and the implementation of wage inflation, rising prices of raw materials.

Figure 1.2
FDI Inflows by Region,1995-2010($ billions)



1.2. Manufacturing development and problems in China under FDI

With joining in WTO and reforming regulation, China's manufacturing industry has developed rapidly, and attracted more and more foreign investors to participate in.

Over the years, China's manufacturing industry has rapidly developed. By 2007, China manufacturing industry has nearly two hundred kinds of products, and its output ranked first in the world. The manufacturing industry accounted for more than 90%, becoming the leading industry China economic growth[12]. But from the international market, China's competitive industry is a labor-intensive industry, where companies beat othersbecause of the advantage of abundant and cheap labor. China's manufacturing products lead to cheap exports. At the beginning of the reform in the 1990s, China's manufacturing industry had a lot of cheap labor, land costs were low as well. The government had many preferential

[10] Constructed from data in United Nations, World Investment Report, 2009 (New York and Geneva: United Nations, 2009),*(http://unctad.org/)*
[11] Constructed from data in United Nations, World Investment Report, 2010,*(http://unctad.org/)*
[12] Source on National statistical annual report 2007

policies to support China as a "World Factory", but now the golden period of development is over; we entered the era of meager profit. But China's manufacturing industry is annoyed about the increasing of wage costs, labor cost, while other Asia countries with cheap labor cost start to attract FDI.

The main problems thatChina encounters in this situation aretechnology and cost, which are shown toadd value on products. This means the increasing value of the total and per capita consumption and manufacturing power still have a large distance. For example, Chinese manufacturing industry per capita increased value only from $267 in 1995 to $463 in 2003 (an increase of 73 percent), but compared with the developed countries in 2003 per capita 5710 dollars, there is still a gap of $5247. The average is even less than Latin America[13].

1.3. Manufacturing development and problems in Asian countries under FDI

The rapid development of ASEAN economies, led to the development of emerging markets in Asia. Singapore's prosperity and progress, life has reached the level of developed countries, economic services, finance, science and technology industry, shipping industry, logistics industry and tourism industry. Indonesia, on a basis of economic development Malaysia and Thailand, in the industrial economy, manufacturing industry, tourism and agriculture, in recent years, the positive development of the shipping industry and logistics industry. Philippines' economy is relatively less developed, with an =economic focus of tourism industry, manufacturing base, agricultural and fishery. Burma, Kampuchea, Laos and East Timor's economic backwardness, Burma, Kampuchea and Laos economy only agriculture and tourism. East Timor's economy is only fishing and oil exports. Although the per capita GDP of Brunei is higher than developing countries, but the overall economic strength is poor and underdeveloped, mainly in oil exports and Natural gas exports, wealth and Middle East oil producing countries that are concentrated in a small number of wealthy-class individuals.

In recent years, due to the Southeast Asian labor advantage, and opening to the outside world, attracting a wide range of FDI played a great role for economic development in Southeast Asia, especially Malaysia, Indonesia, Thailand and other countries.

[13] Source on National statistical annual report 2003

1.3.1. Malaysia

Malaysia's manufacturing industry is the largest production sector, in which the pace of development started pulling up 30 years ago. In the 1970s, Malaysia was originally dominated by agricultural economy, and then it started to export the products, vigorously promoting the export, which pushed electronics industry, manufacturing industry, and service industries developing rapidly in 1980s. By the 1997 Asian financial crisis, Malaysia ringgit currency against the dollar declined 46%, and the stock index fell more than half. In the following year 1998, for the first time in 13 years Malaysia went through a negative growth (- 7.5%) with increasing unemployment rate and inflation rate.

But the problem is, although its economy went down in 1997, Malaysia's manufacturing industry from beginning to end is the biggest competitor of China. It always seized the opportunity to attract FDI from China, and the international trade and Industry Affairs, Ms. Chen Yiqiao said, the influx of Chinese products and the withdrawal of foreign capital factory did not affect the manufacturing industry in Malaysia and export[14]. Before 2002, the manufacturing industry approved investment projects, even more than 60% FDI, in 2003 dropped to 53.6%, the first nine months of this year is down to 41.6%; exports in the first nine months is about 354 billion ringgit ($93 billion 200 million), which can fully explain the enhanced local manufacturing competitiveness.

1.3.2. Indonesia

Indonesia is the one of the largest ASEAN economies. Its textile and apparel, footwear manufacturing industries have rapidly developed as important industries in Indonesia. The scale of output and employment in the country in various industries have the leading position. The Indonesian industry supply chain is very complete, fiber, spinning, weaving, dyeing and finishing, garment manufacturing facilities, becoming one of the world's top ten textile and garment production and export country. Among them, the strong support of the policy involves the Indonesian textile and garment.

The rise of the manufacturing sector in Indonesia, the abundant and cheap labor is the main advantage of the rapid development, in Indonesia's 94 million employment population, 12% are working in the manufacturing sector (about 113 million people). Employment in the textile industry accounts for about 15% of manufacturing (about 175 million people, does not contain 200 million indirect employment population). Indonesian workers' basic monthly wage for 150 million Indonesian rupiah (about 810 yuan). Compared to China, still have a greater advantage.

1.3.3. Thailand

The solid manufacturing industry in Thailand is the automobile industry, being thelargest automobile industry in Southeast Asia as well as computer hardware manufacturing with a large number of skilled workers, less affected by the political changes because the location of factory is in the East of Thailand. Japan also directly invest a lot in Thailand, to open the factory for TOYOTA and Honda.

But the Thailand manufacturing industry also hid worries in it. Its labor intensive industries such as apparel, footwear, leather industry are facing huge competitiveness problems, namely because of labor cost in other low cost countries such as India and Vietnam.. The main reasons involve events after 1997, whe the currency of Thailand

[14]Source on website 'The development of Malaysia' (http://www.istis.sh.cn/list/list.aspx?id=7669)

decreased so much, and it became the bargaining power of its labor cost. Since the rapid development came to effect, the currency appreciation might have been the cause of the problems. Therefore, Thailand improved the production efficiency of the enterprise and the competitors were able to help Thailand in another way with the production of similar products to compete with others.

2. Literature review

2.1. Literature origin

The history of research on FDI, which always considered competitive advantages of different costs has two directions. One is from the traditional trade theory of new trade theory to transnational investment theory, the other direction is a comparative cost theory, which played a progressive role in history. It provides a theoretical basis for the policy of free trade and promoting the UK capital accumulation and productivity development. Overall, the comparative cost theory in accelerating the development of social economy's role doesn't allow doubt. Its biggest contribution to the theory of international trade is to provide the first evidence for free trade and labor productivity from the different angles to explain the success of international trade business. Until today, this theory is still approved of, especially in developing countries. The theoretical basis for the development of foreign economic and trade strategy that whether it is based on comparative advantage in labor differences, or production based resource, sharing elements of supply is a static analysis framework. It has the static characteristics of the traditional comparative advantage which is a dynamic development path to flow easily ignored[15]. On the essence of productivity, the comparative advantage is the starting point for the development and cultivation of national industrial support of original advantage. The international comparison does not necessarily have a competitive advantage. Thereforeo better comparison of dynamic development create endogenous advantage and competitive advantage to attract FDI. According to the traditional theory of comparative advantage in the region, the influence factors of resource endowment and production development policy to develop a variety of favorable conditions, it has certain guiding function. But it ignores the technology transformation of comparative advantage culture and potential benefits of exogenous progress, is a static development ideas, it is easy to expand between developed areas and backward areas[16]. Due to the traditional theory of comparative advantage it brings, which is conducive to further expansion and the theory of comparative advantage theory.

2.2. Correlation literature on Costs & FDI

The Gelingen University in Holland established labor productivity related research on International Comparison Project (International Comparison of Output and Productivity, ICOP). More in-depth comparative study of the world's major manufacturing countries, labor productivity, which would promote the labor productivity of the development of international comparison. And research can be used for thinking over the comparative advantage in each countries to help investors to choose the right place to push FDI. Main research institutions researched the manufacturing cost in the global competitive advantage, such as cost-benefit comparison of output and international began in late seventeenth Century. The Economic Commission for Europe, mainly to the United Nations, including the world bank and other international institutions to create a research

[15]Journal on Economic Review, LIHUIWEN, The dynamic nature of the modern comparative advantage theory: a discussion on the trap of comparative advantage"2004(1) P42

[16]Journal on Modern Finance and Economics, Research on the characteristics and defects of the traditional foreign trade comparative advantage theory, ZHAOXIAOCHE, 2005(1) P47

project of the international comparison. These institutions collected some data made in world manufacturing industry and on the official website of the labor cost and productivity index calculation, analyzing the basic economic development prediction.

3. Sample and Model

The research objectives of this work are as follows:
Showing all of six countries' situations of three variables, unit labor costs, unit labor productivity and unit wage costs per hour, during 2003-2013.

3.1. Unit labor costs

"Unit labour costs" (ULC) is labor costs and the actual increase in the value of the ratio, which represents each additional unit added value cost of labor costs, reflecting the labor cost and labor productivity relative changes. Specific formula is:

$$\mathrm{ULC}^{\mathrm{X(U)}} = \frac{\mathrm{LCH}^{\mathrm{X(U)}}}{\mathrm{OH}^{\mathrm{X(U)}}} \qquad (1)$$

Formula (1), ULCX(U) is X country in dollar denominated unit labor costs, and LCHX(U)is labor cost for the all the staffs per hour in X country, OHX(U) is X country's added value cost of labor costs for the all people per hour.

In order to facilitate the analysis and comparison, it is necessary to adjust the unit labor cost:

$$\mathrm{ULC}^{\mathrm{X(U)}\prime} = \frac{\mathrm{LCH}^{\mathrm{X(X)}}/\mathrm{ER}^{\mathrm{XU}}}{\mathrm{OH}^{\mathrm{X(X)}}/\mathrm{PPP}^{\mathrm{XU}}} \qquad (2)$$

In the formula (2), LCHX(X) is in local currency of country X employment hourly labor costs, ERXU is nominal exchange rate between X's currency and the dollar. OHX(X) is expressed in local currency in X country workers per hour to create added value. PPPX(U) is purchasing power parity exchange rates between X country and U.S. dollars, and ULCX(U)'is unit labor cost after adjusted through PPP.

3.2. Unit labor productivity

Unit labor productivity, according to the law of China, it provides workers work eight hours a day, annual working days for 250 days. The average annual wage divided by 250 days divided by eight hours. For the convenience of comparison, the working time of the Southeast Asian countries are the same as China does. The calculation method of labor productivity is the product of the increasing value of manufacturing industry divided by the product of the average working hours of manufacturing employment and the average working hours of manufacturing workers.

3.3. Unit wage costs per hour

Unit wage costs per hour, as we all know the cost of labor not only includes wages and salaries, also includes various forms of payment of benefits, employer social security costs, tax costs, education, training costs, employee recruitment costs and housing costs. The project will discuss the Southeast Asian countries, because the labor cost data is very large and some welfare cannot estimate it directly. For comparison, Calculation method of average hourly wage cost is determined by the average annual salary of the country's

manufacturing industry (USD) divided by the average annual employment work, average wage employment nationwide manufacturing hours (USD).

3.4. Sample selections

Quantification of these three variable terms are useful to do the comparison in vertical and horizontal with six countries during 2003-2013; Comparison of the China and any other three countries to find the truth that who is the 'World Factory' in the near future.

4. Statics Analysis

4.1.Vertical analysis

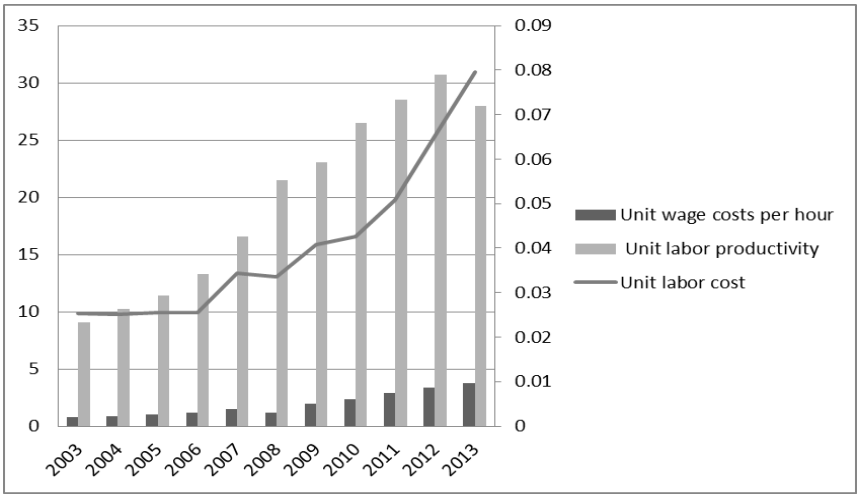
4.1.1. China

Figure 1.1

Unit labor productivity，Unit wage costs per hour and Unit labor cost ($)

Time	Unit labor cost	Unit wage costs per hour	Unit labor productivity
2003	9.04	0.77	0.025
2004	10.24	0.86	0.025
2005	11.42	0.98	0.026
2006	13.32	1.17	0.026
2007	16.58	1.45	0.034
2008	21.49	1.18	0.033
2009	23.08	1.96	0.040
2010	26.46	2.33	0.042
2011	28.5	2.90	0.051
2012	30.73	3.34	0.065
2013	27.97	3.71	0.079
2013/2003	3.09	4.85	3.15
2013-2003	18.93	2.95	0.054

Sources are from World Bank and National Bureau Of Statistics Of China



Conducted by the Figure 1.1

1. Unit labor productivity

In the period 2003 to 2013. From the point of development trend, the overall performance of China's labor productivity is increasing trend, which proved the power of 'World Factory' in China, but the thing is that it had a decrease in 2013. Government explained that the whole walks of life in China was experienced a transfer, and the economy was going into a soft landing, which makes the price of material returned back. Except these, China's labor unit cost from $9.04 in 2003 increased to about 3.09 times from 2003 to 2013, about $27.97. The scale economy had lots of power in China, which makes China had remarkable productivity from these Asian countries.

2. Unit wage costs per hour
During 2003 to 2013, China's average hourly wage rose about $2.94 to exactly $3.71 in 2013. From the absolute value in 2008, due to the impact of the financial crisis from $1.452 fell to $1.18. Then in 2009 after the regulation support and monetary easing stragety, the soft growth happened to $1.96. Above all, to 2013, unit wage cost per hour went up about 4.85 times, and the range of 10 years is about $2.94.

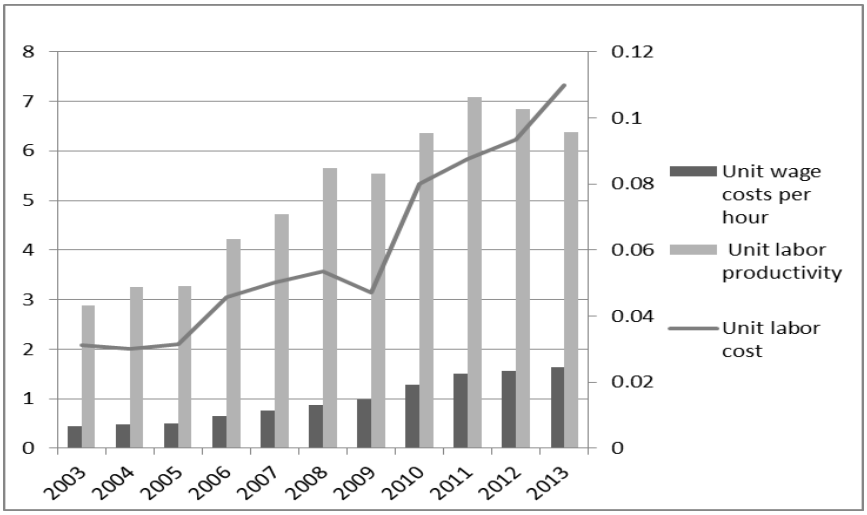
3. Unit labor cost
During 2003 to 2013, from the view of development, China's unit labor productivity went through an increasing trend; which rose to $0.0796 in 2013, three times bigger than 2003. The most interesting thing is that 2008 viewed a little decrease, so it's clear to understand 2008 global finance crisis didn't have great impact on China, and government prepared a lot to prevent the emergency. Among the Asia countries, China is one of countries which put into effect scale economy significantly. Overall in addition to the financial crisis of 2008 caused a downturn and the rest in a rising trend, due to the rapid economic development in 2013 rising slowly. In the past these year, Chinese government stated that the economy in China is soft landing, which cause lots investors try to push out the investment in mainland with volatility of RMB.

4.1.2. *Indonesia*

Figure 1.2
Unit labor productivity，Unit wage costs per hour and Unit labor cost ($)

Time	Unit labor cost	Unit wage costs per hour	Unit labor productivity
2003	2.88	0.45	0.031
2004	3.26	0.47	0.030
2005	3.28	0.50	0.031
2006	4.22	0.65	0.045
2007	4.73	0.76	0.050
2008	5.65	0.88	0.053
2009	5.53	0.98	0.047
2010	6.36	1.28	0.080
2011	7.08	1.49	0.087
2012	6.84	1.55	0.093
2013	6.37	1.64	0.111
2013/2003	2.20	3.61	3.533
2013-2003	3.49	1.18	0.0788

Sources are from World Bank and National Bureau Of Statistics Of China



Conducted by the Figure 1.2

1. Unit labor productivity

During ten years, Indonesia labor productivity rose slowly, for the range of labor productivity was $3.49. The base of productivity in Indonesia was low about 2.89 in 2003, though it went through 2.2 times bigger in ten years. The low development of productivity couldn't attract FDI funds, which made investors depressed.

2. Unit wage costs per hour

Ten years wasviewed as arising trend of wage cost in Indonesia, and average hourly wage was 3.6 times than ten years ago, which was quite opposite to the volatility of labor cost. The range of absolute value was about $1.19.

3. Unit labor cost

In the period 2003-2013, from the point of view of development trend, whether it is before or after the adjustment, unit labor costs in Indonesia as a whole performance for fluctuations in the situation, the 2003 to 2008 has been in 2004 $0.1473 and $0.0301 and reached the maximum in 2007 to $0.1622 and $0.0501. After 2008 global financial crisis in 2009 started to keep on rising. In a word, Indonesia unit labor costs seemed to rise about 3.53 times than ten years ago, but the fact is the volatility is uncertain, which cause the danger for FDI to push the asset allocation in it.

4.1.3. *Malaysia*

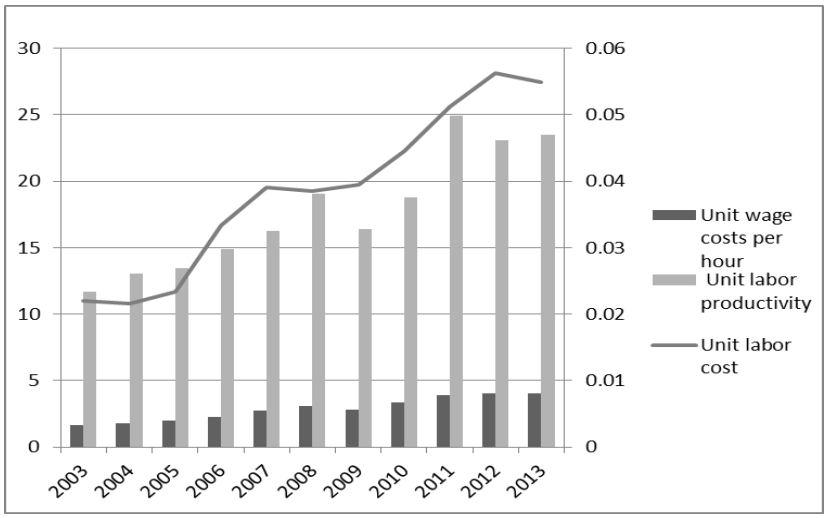
Figure 1.3

Unit labor productivity，Unit wage costs per hour and Unit labor cost ($)

Time	Unit labor cost	Unit wage costs per hour	Unit labor productivity
2003	11.71	1.63	0.022
2004	13.04	1.78	0.021
2005	13.44	1.98	0.023
2006	14.90	2.28	0.033
2007	16.22	2.72	0.039
2008	19.06	3.06	0.038
2009	16.36	2.84	0.039

2010	18.79	3.37	0.044
2011	24.94	3.90	0.051
2012	23.08	4.01	0.056
2013	23.46	4.06	0.054
2013/2003	2.00	2.47	2.49
2013-2003	11.74	2.42	0.032

Sources are from World Bank and National Bureau of Statistics of China



Conducted by the Figure 1.3

1. Unit labor productivity

From the trend during 2003 to 2013, the productivity of Malaysia experienced a general rising time with high volatility. For example, it shows that in 2003 to 2008, Malaysia went through a gradual increasing trend. But during 2006 and 2007, the fluctuation of rising went up, somewhat it falls down in 2009. Finally, it kept going after 2009, it reached the biggest increase in 2011, compared with 2010, increasing almost $6.2. Although 2012 didn't maintain the trend of rising power, it went through steady rising. In short words, the unit labor productivity in Malaysia increased $11.75, twice bigger than in 2003.

2. Unit wage costs per hour

During the period from 2003 to 2013, Malaysia's average hourly wage costs went up except in 2009. The thing which made sense is about after decline in 2009, the recovery of economy in coming three years was really powerful, which increased almost 0.53. The range of ten years about unit wage costs per hour was 2.42, the cost in 2013 was about 4.06.

3. Unit labor cost

In the period of 2003 to 2013. Overall, regardless of original data and adjusted data of labor cost, it increased for about 2.50 times, but it had an intermediate fluctuation, the fall happened in 2007 and 2008. From the point of view of absolute value, in 2013, the adjusted unit labor costs were $0.0549, which increased about $0.0329 in ten years.

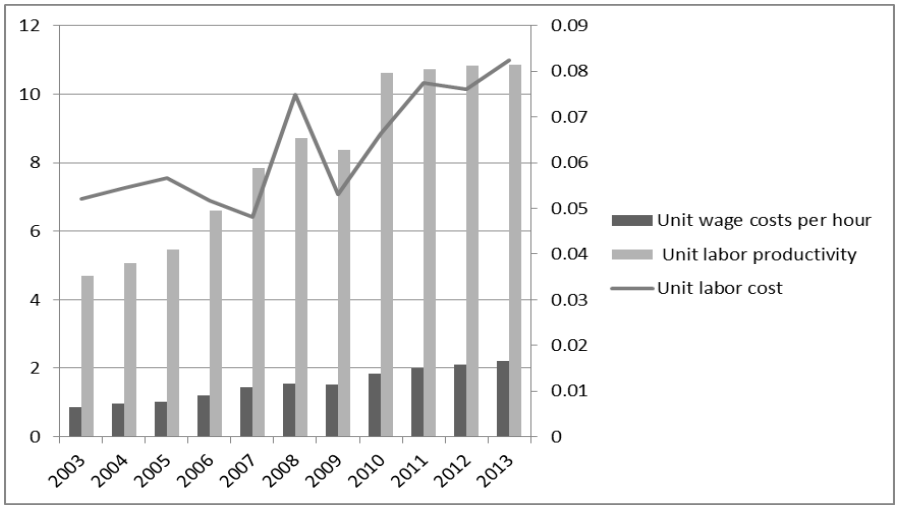
4.1.4. Thailand

Figure 1.4

Unit labor productivity，Unit wage costs per hour and Unit labor cost ($)

Time	Unit labor cost	Unit wage costs per hour	Unit labor productivity
2003	4.68	0.85	0.052
2004	5.07	0.96	0.054
2005	5.47	1.01	0.056
2006	6.59	1.20	0.051
2007	7.83	1.44	0.048
2008	8.70	1.54	0.074
2009	8.37	1.52	0.053
2010	10.61	1.85	0.066
2011	10.72	1.99	0.077
2012	10.84	2.10	0.076
2013	10.85	2.21	0.082
2013/2003	2.31	2.59	1.58
2013-2003	6.16	1.36	0.030

Sources are from World Bank and National Bureau of Statistics of China



Conducted by the Figure 1.4

1. Unit labor productivity

From 2003 to 2013, the overall Thailand labor productivity showed a growth trend, while in 2009 it dropped slightly, and rose in 2010 by $2.3. After 2010, productivity was basically stable, keeping small amplitude increase. Finally, in 2013 it stopped rising over $10.86, about three times bigger than ten years ago.

2. Unit wage costs per hour

During 2003 to 2013, Thailand's average hourly wage costs experienced a rising trend. Somehow it dropped down in 2009, it kept going in 2010 and went through a substantial growth, after 2010. The unit wage costs per hour in Thailand was $2.21, which was more than 2003 years about $1.36.

3. Unit labor cost

In the past decades, the condition of labor cost in Thailand was uncertain with high volatility, maybe is because of the turbulence policy. After the rise in 2004, it suddenly went back to the original in 2005, it recovered to rise a little in 2006. The following years in 2007 and 2008 were full of volatility. Finally, in the 2003, it went up to $0.0824, while the range of labor cost was $0.03.

4.2.Horizontal comparison between China and Asian Countries

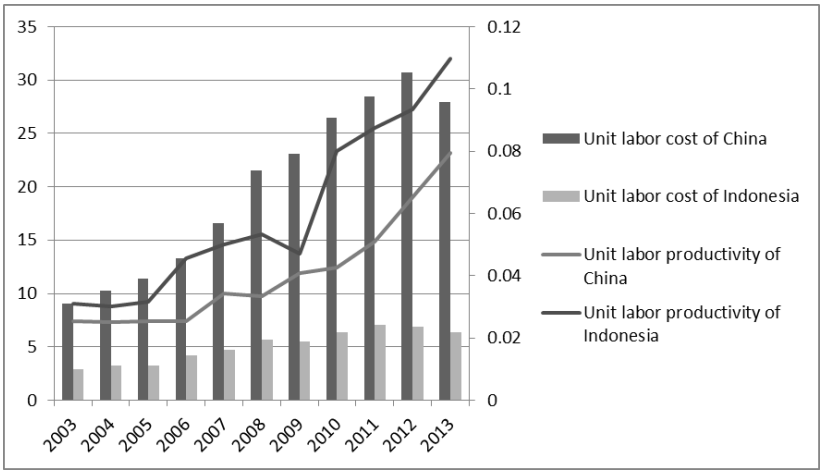
4.2.1. China VS Indonesia

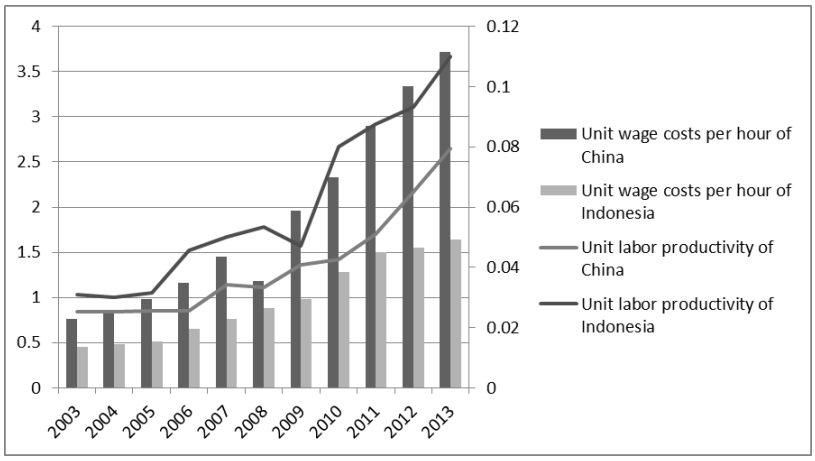
Figure 1.5

Comparison of Unit labor productivity，Unit wage costs per hour and Unit labor cost ($)

Time	Unit labor cost		Unit wage costs per hour		Unit labor productivity	
	China	Indonesia	China	Indonesia	China	Indonesia
2003	9.04	2.88	0.76	0.45	0.025	0.031
2004	10.24	3.25	0.86	0.47	0.025	0.030
2005	11.42	3.27	0.98	0.50	0.025	0.031
2006	13.32	4.22	1.16	0.65	0.025	0.045
2007	16.58	4.72	1.45	0.76	0.034	0.050
2008	21.49	5.65	1.17	0.88	0.033	0.053
2009	23.08	5.53	1.96	0.98	0.040	0.047
2010	26.46	6.36	2.33	1.28	0.042	0.080
2011	28.5	7.08	2.90	1.49	0.050	0.087
2012	30.73	6.83	3.34	1.55	0.065	0.093
2013	27.97	6.37	3.71	1.64	0.079	0.110

Sources are from World Bank and National Bureau of Statistics of China





Conducted by the Figure 1.5

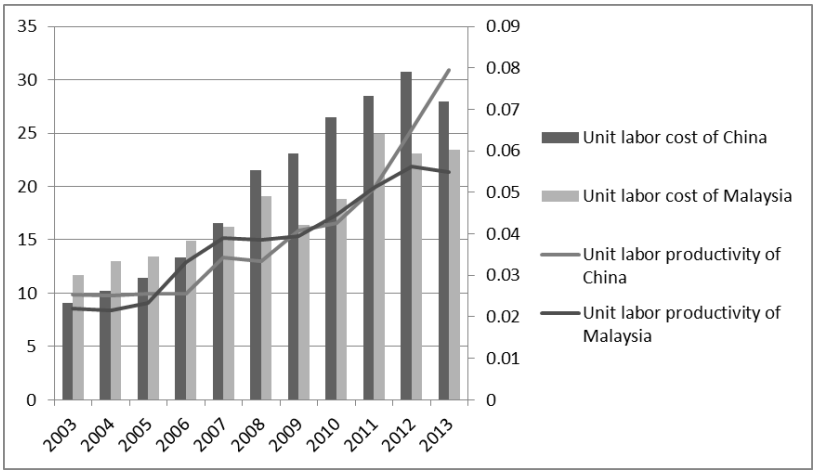
Comparing China and Indonesia, in the period of 2003-2013, adjusted Unit labor costs in China didn't grow a lot, while its unit labour costs are still lower than Indonesia. In 2013, China is 1.38 times bigger than Indonesia in unit labor costs. From Indonesia, China's manufacturing industry cost advantage is still very obvious, that is to say, manufacturing unit labor costs in China below to Indonesia, indicating that at least in labor-intensive industries, China had its steady position. From the perspective of comparison between China and Indonesia, China manufacturing employment labor productivity of annual growth rate was far higher than Indonesia, until 2013, China's labor productivity is $27.97, while Indonesia is $6.37. Finally, the comparison of the average wage cost of China and Indonesia showed when the time was 2003 to 2005, two countries had roughly the same position. But China went through a rapid speed after 2006, for example in 2006, China grow to 3.71, while Indonesia was 1.64, though with an upward trend, the growth trend in Indonesia was slow.

4.2.2.China VS Malaysia

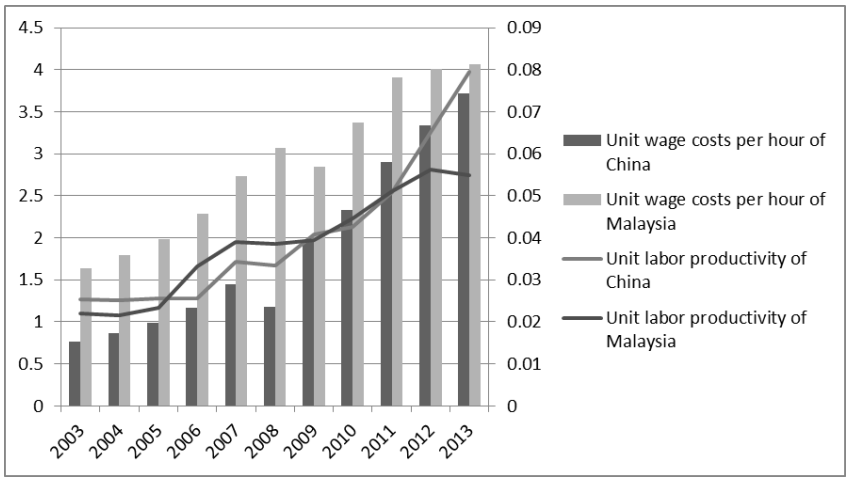
Figure 1.6

Comparison of Unit labor productivity，Unit wage costs per hour and Unit labor cost ($)

Time	Unit labor cost		Unit wage costs per hour		Unit labor productivity	
	China	Malaysia	China	Malaysia	China	Malaysia
2003	9.04	11.71	0.76	1.63	0.025	0.022
2004	10.24	13.04	0.86	1.78	0.025	0.021
2005	11.42	13.44	0.98	1.98	0.025	0.023
2006	13.32	14.90	1.16	2.28	0.025	0.033
2007	16.58	16.22	1.45	2.72	0.034	0.039
2008	21.49	19.06	1.17	3.06	0.033	0.038
2009	23.08	16.36	1.96	2.84	0.040	0.039
2010	26.46	18.79	2.33	3.37	0.042	0.044
2011	28.5	24.94	2.90	3.90	0.050	0.051
2012	30.73	23.08	3.34	4.01	0.065	0.056
2013	27.97	23.46	3.71	4.06	0.079	0.054



Sources are from World Bank and National Bureau of Statistics of China



Conducted by the Figure 1.6

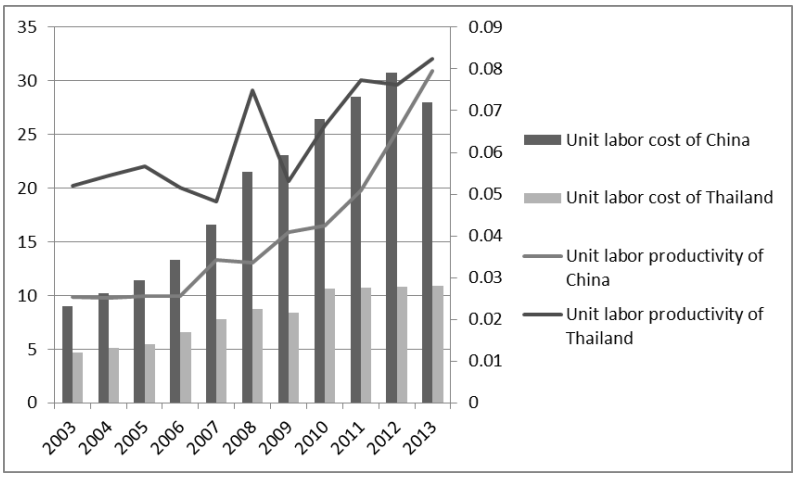
From the point of view of comparing China and Malaysia, during 2003-2013, unit labor costs in grew marginally, and it was still higher than Malaysia, but weren't obvious. In 2013, China's unit labor costs are 0.079, instead of counterparty, Malaysia was 0.054. Only saw the range of labor cost, Malaysia's competitiveness was a little weaker than China's. On labor productivity of China and Malaysia, in general, both China and Malaysia had an increasing trend, including Malaysia grew from $11.71 in 2003 to $23.46 in 2013. What's more, the speed of increasing in China was bigger than Malaysia, China didn't chase over Malaysia until 2007. It means that in the short term, hourly labor productivity in China would hold adequate power to transcend other developing countries in Asia. Average hourly wage costs in 2003 to 2013 between these two countries remained to be unchanged a lot, receptively $3.71 in China and $4.06 in Malaysia.

4.2.3.China VS Thailand

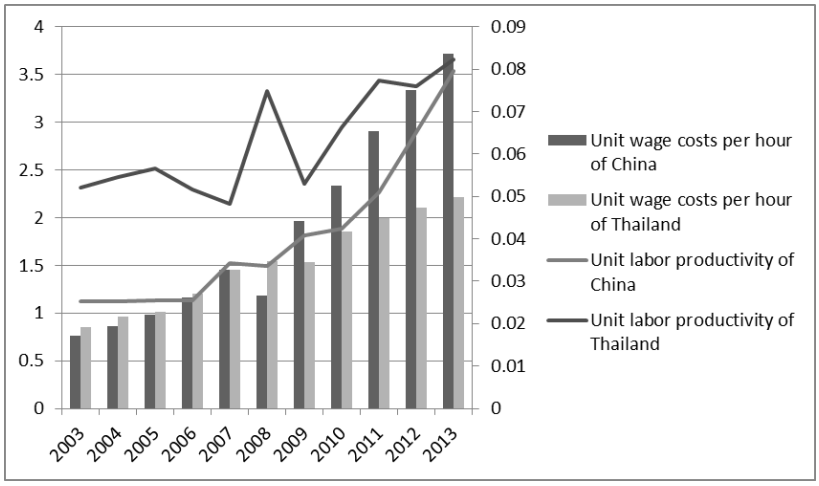
Figure 1.7

Comparison of Unit labor productivity，Unit wage costs per hour and Unit labor cost ($)

Time	Unit labor cost		Unit wage costs per hour		Unit labor productivity	
	China	Thailand	China	Thailand	China	Thailand
2003	9.04	4.68	0.76	0.85	0.025	0.052
2004	10.24	5.07	0.86	0.96	0.025	0.054
2005	11.42	5.47	0.98	1.01	0.025	0.056
2006	13.32	6.59	1.16	1.20	0.025	0.051
2007	16.58	7.83	1.45	1.44	0.034	0.048
2008	21.49	8.70	1.17	1.54	0.033	0.074
2009	23.08	8.37	1.96	1.52	0.040	0.053
2010	26.46	10.61	2.33	1.85	0.042	0.066
2011	28.5	10.72	2.90	1.99	0.050	0.077
2012	30.73	10.84	3.34	2.10	0.065	0.076
2013	27.97	10.85	3.71	2.21	0.079	0.082



Sources are from World Bank and National Bureau of Statistics of China



Conducted by the Figure 1.7

In period of 2003 to 2013, the trend of labor productivity in China and Thailand experienced an increasing, but China remained a leading advantage over Thailand. In 2003, China's labor productivity was 3.13 times of Thailand, and in 2013, the Chinese labor productivity was 2.58 times of Thailand, from this point of view, although the figures that China had the absolute advantage, but Thailand was narrowing the gap with China. Unit labor costs in China and Thailand increased as well. From the point of view, Chinese unit labor costs were significantly lower than those in Thailand. But in 2003, Thailand was 2.05 times of China. Then the time went to 2013, the labor cost in Thailand was only 1.03 times that of China, which means the advantage of cheap labor in China was not significant enough. Average hourly wage costs were increasing trend during ten years, but the growth rate of China was significantly sharper than in Thailand. In 2003, China's average hourly wage costs was $0.76, which was lower than in Thailand, about $0.85. When the time went to 2013, Chinese average wage cost became $3.71, while it was only $2.21 in Thailand; thus in wage costs, China has lost the previous advantage.

4.3.Short summary

In this report, I compared the labor cost, wage cost and productivity to decide the competitive advantage in different countries and get the result which countries may be attracted FDI, through the vertical and horizontal two aspects, achieving the following conclusions.

First, from the unit labor costs, China showed the power during this ten years from 2003 to 2013, it gradually increased except 2008. For example in 2013, unit labor costs in China was $0.079, while in Southeast Asia, during the same period, except that Malaysia's cost was the lowest, exactly $0.054. However, unit labor costs in China was only higher than Malaysia and obviously lower than any other Southeast Asian countries. In 2013, Thailand, Indonesia, the unit labor costs were 1.03 times, 1.38 times than China, compared with 10 years ago 2.05 times, 1.22 times. It's easy to find the spread between countries was narrow and the most competitive counterpart of China is Malaysia. Unit labor costs in 2013 was only $0.0549, corresponding $0.079 in China, which made a larger gap during 10 years. That is to say, the low cast of labor cost in China would be chased, though it still had some advantage, not so large. More and more investment and asset would push into other Asia countries.

Second, from the point of view of labor productivity, during 2003 to 2013, Chinese labor productivity went through a gradual increasing, until in 2013 it showed a fall, which is because of the policy that government though of the economy going too fast in the past; in hence, 2013 seemed to be a soft landing of development. Analyzing the absolute range, Chinese labor productivity increased from $9.04 in 2003 to $27.97 in 2013, compared with the rest of the several Southeast Asian countries, the performance of labor productivity in Thailand continued to rise, while Malaysia and Indonesia had quite same circumstances like the year 2013 in China, which only decreased in 2012 and rose to the regular part in following year 2013. Chinese manufacturing labor productivity growth rate is still higher than other Asia countries. Malaysia kept the pace after China. We can find the change rate of ten years in China was 3 times, and the rest of it are 2-2.6 times, no more than China. Chinese ten year growth rate was $18.93, and Malaysia was $11.74, Thailand was $6.16, from which we can find except that Malaysia has a certain impact on China, the rest of the countries had a huge gap.

Third, from the average wage costs in the study, I found that China rose as well during ten years. In absolute terms, it changed from $0.76 in 2003 to $3.71 in 2013. The rest of the observation, represented by Malaysia to develop steadily beyond Chinese. It can be said that the treatment in Malaysia was higher than in China, but its growth rate wasn't bigger than China, respectively 2.48 times and 4.85 times, which means China approach the wage level as soon as possible. The rest of countries like Indonesia and Thailand were about $1.64 and $2.2. So comparison of China and Southeast Asian countries, annual growth rate in China had obvious advantages, only except the gap between China and Malaysia were more and more narrow.

Above all, we can return to our questions that will China attract FDI in the coming years? Will the China still have the competitive advantages in Asia countries? The truth is the position of 'World Factory' does threat by other countries and the cost of manufacturing in China compared to 10 years ago, became serious. The most competitive country is Malaysia as no doubt. The rest of countries like Thailand and Indonesia just hurried to chase the Chinese manufacturing industry as what China did ten years ago. They have more cheap labor costs, so the future direction of Chinese manufacturing industry requires innovations in change, continue to moderate growth, changing the labor productivity growth, and never gets rid of the present situation.

5. Conclusion

This article studies the related indicators from China's manufacturing cost competitiveness: unit labor costs, labor costs and labor productivity trends in China to study the changes in manufacturing cost-competitive advantage and deeply study the main factors that affect the cost competitive advantage. Chinese manufacturing hourly labor costs Trends indicate: whether it is denominated or dollar-denominated Chinese manufacturing labor costs, both showed an upward trend. Before the year 2006, the trend is gentler, then more substantial growth, while labor costs rise constantly. Although China still has the advantage, the gap is shrinking by other Southeast Asian countries. In terms of labor-intensive industries, the advantage of our country is not as obvious as they used to be.

Labor productivity in manufacturing showed a rising trend. Relatively stable growth before 2005, after then it shows strong growth and exceeds the growth rate of labor cost in the same period. In addition to Malaysia, which has a certain impact on China, the rest of the country has a huge gap.

Compare the changes of labor productivity and UCL in Chinese manufacturing to the international situation, it shows that Chinese manufacturing labor productivity during the study showed a strong upward trend, exceeding the growth rate of labor costs over the same period , ULC overall performance of a downward trend. The above findings show that China's manufacturing labor costs rose by a big margin, but continues to decline in unit labor costs, labor productivity growth effectively offset the adverse impact of rising labor costs on the competitive advantage brought about. Compared with developing countries, china's long-standing industrial supporting environment, skilled labor and logistics condition also have a competitive advantage. It is unnecessary to concern ourselves about the disappearance of cost competitive advantage simply because of the rise of the wages.

With the rise in Chinese labor income and factor prices, low-cost competitive advantage is being undermined. In addition, with the gradual implementation of the scientific concept of development, previously underrated elements of labor will continue to be corrected, and the prevalence of international trade protectionism, would challenge the cost competitive advantage in Chinese manufacturing industry. China's low-cost competitive advantage will not disappear in a moment, but this advantage will be weakened in the near future, which in recent years have clearly demonstrated the southeast coastal areas.

Therefore, to sum up, in the background of rising labor costs and fierce competition in international trade situation, the advantage of China's low-cost manufacturing will slowly lose. First, we must maintain our core competitiveness through the differentiation strategy, industrial upgrading or continue the labor productivity. Second, today's international division of labor determines China's manufacturing industry is still quite a long time in the future is a low-cost processing base in developed countries.

6. Suggestions

Faced with the unfavorable situations mentioned in this article, in order to turn "crisis" into an "opportunity", we must strive to cultivate technology, brand, quality and service as the core of the new competitive advantages. To do this purpose, in addition to government and social intermediary organizations to create a favorable external environment and market conditions, the companies should also do a good job in the following aspects.

First, improve product technology and quality. Technology is the foundation of foreign trade competitiveness. Qualified enterprises should firstly strengthen cooperation with research institutes and universities, to establish technology platform for innovation and research to strengthen the capability of development, testing and design. Secondly, it should improve the technological content. Quality is the life of trade competition. Thirdly, it should strengthen the construction quality standards, quality certification, quality control and other aspects of investment. Fourthly, it should actively carry out the internationally accepted quality management systems, environmental management systems and product certification and actively participate in formulating various international standards, technical standards.

Second, expand brand products exports. There is a saying in the industry called "first-rate enterprises selling brand, second-rate companies selling products, third-rate companies selling coolies."

This indicates that enterprises should become first-rate enterprise, we must pay attention to the brand development, brand management and strive to build business, industry, product brand. Also we should actively develop overseas trademark registration, using our own brand, cultivating an international brand. Through the tireless efforts of the vast number of businesses, we can establish the image of our country's foreign trade big brand effect.

Third, establish an international marketing network. We should change management concepts, and actively go out to look for opportunities abroad. And establishing an independent marketing network to strengthen the supply chain and extends it directly from the client to the final consumer. We will have more room to carry out competitive differentiation, reduce dependence on international trade intermediaries and enhanced voice control and distribution channels through the international marketing network construction.

Fourth, actively explore new markets. We should make full use of the international exhibition, e-commerce, foreign trade and other international commodity markets combined with trade promotion platform while consolidating the traditional markets and actively explore developing markets in Africa, Latin America and the Middle East.

In the process of exploring new markets, remember not to underestimate the importance of emerging markets. You might be turning it into a low -tech, low value-added product dumping ground. We should pay attention to product quality and brand from the outset and maintain, consolidate and expand these markets well. At the same time, we must pay attention to the impact of emerging markets competitive advantage for Chinese enterprises.

Fifth, strengthen the communication and exchanges with foreign counterparts. We should actively participate in various exhibitions abroad especially the export target market, fully rely on the import and export chambers of commerce and other trade organizations and foreign counterparts to interact , to grasp trends and looking for business opportunities.

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