



American high-tech economy battle ground

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Introduction

Low- and mid- tech manufacturing (software and hardware, consumer or industrial) are undeniably permanently rooted in Asia. The only edge American can maintain is the high-tech. American has been very effective to create new frontier of high-tech frontier. As the result, the continuous losing ground in high-tech area, such as memory, LCD, still keep the throne of the high-tech. The situation may have change when Lenovo bought PC and massive software outsourcing to India. What does this mean to the world economic cycle?

Triggers

Two important events that boost the technology and knowledge work industries in Asia. The first one happened more than 20 years ago. India has started the software business park at Bangalore which attracted hundreds of global companies such as IBM, Nortel or Intel to set up R&D lab in India. Since then India has become the preferred outsourcing countries due to its low cost. The second event was centralization of world PC manufacturing in China. Most of the PC (including Mac) and laptop is manufactured in China or most of the components (except the memory and processor) are manufactured in China. Motherboard is the prime example.

India: support to develop

India's software industry has been become mature. According to [1] & [2], Indian IT firms, such as Infosys, Wipro, TCS, surpassed US\$2B in revenue and maintaining a growth rate of 30% in 2005. With this rate, IBM, Microsoft and Apple should be concerned. These Indian software giants are so confident that they have recently acquired consulting firms and hired professional in US. We should pay special attention to this move. This does not guarantee the jobs remains in US. Once the knowledge and contacts are acquired, the US location will be just the reception. This ferocious transition was reported in [4].

Does this mean India is the king? Not really. Starting last year, the price pressure is felt by the India companies. In turn, they have to outsource it to China's Xi'an entrepreneurs.

China: manufacture to design

With the help of Taiwan, the China's computer industry has been growing fast. At the beginning it was the manufacturing by importing the whole factory. With the lifting of Taiwan's restriction to assemble the complete computer, many of the production work, end to end, is completed in China. This involves the design, engineering and improvement of components which of course includes the processor and memory. In time, Intel or AMD may receive change or feature request directly from China. As we all

know the pattern of China technology development, the government will demand the technology suppliers to set up a factory in China which will train the local people. Within a few years, there will be emerging of new Chinese suppliers to buy out or compete with these global giants.

Knowledge is Economy

Knowledge is the foundation of product development and wealth generation. When a country master the knowledge, it could develop new products that world desires. So far, we have seen one possible outcome of this development: export of Chinese made automobile. Chinese auto manufacturer Chery has already planned to market cars in the US market. If you wonder how creative the Chinese could be to compete globally, you can find the first Chinese production electric car Xebra has already been shipped to US in [7]. Look at the irony, Detroit is threatened by Toyota and now by Chinese in 2006. Chinese leadership is no more counted in years; it is counted in months.

Conclusion

Many economists have been worry about the deterioration of American economy will create a down fall of the commodity cycle. We should understand the perspective of these economists. They have not taken the action in Asia. The rise of Chindia will fuel the consumer demands that could replace the American. The worry is whether the rise will catch the fall. Without and solid figure and using the ranking from the World Economic Forum that China is the fourth largest economy in the world, the combined demand growth of Chindia could overtake the downfall of American.

Resources

[1] <http://www.infosys.com/investor/default.asp>

[2] <http://www.tcs.com/investors/default.aspx>

[3] <http://www.wipro.com/itservices/index.htm>

[4] Can Indian Software Firms Compete with the Global Giants, Computer Magazine of IEEE, July 2006.

[5] Is Production Pulling Knowledge Work to China? A Study of the Notebook PC Industry, Computer Magazine of IEEE, July 2006.

[6] China targets Europe and South America as new export market for autos, 2006.08.03, People's Daily Online,

http://english.people.com.cn/200608/03/eng20060803_289337.html

[7] Chinese Auto Manufacturer Exports First Production Electric Vehicle to US, 2006.08.08, <http://www.theautochannel.com/news/2006/08/08/017805.html>