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# Andersons Policy Bulletin



## Do China's rising wages mean the end of its competitive edge?

### China's Current Trading Position

Despite the global recession, the value of China's total trade (exports plus imports) accounted for 48% of its GDP at the end of 2011 (Lemoine and Ünal, 2012). Expanded participation in international trade has culminated in China becoming the second-largest trading economy in the world, trade also being a significant factor in its economic growth (Lin *et al.*, 2003). China's integration into world markets has also had a significant impact on developed market economies. For example, over the past two decades, industries in both the US and European Union (EU) have faced increased import competition from China, without any offsetting increase in demand from China for their exports. In the case of the US, over the period 1991-2007 imports from China increased by 1,156%, US exports to China increasing by only 456% (Autor *et al.*, 2013).

While economic theory indicates that increased trade with China generates aggregate net benefits, it also has the clear potential to generate distributional consequences through its effect on manufacturing employment, household income, and government safety-net programs. Historically, imports from low-wage countries have had little effect on US labor markets, but between 1991 and 2007, the share of low-income countries in US manufacturing imports rose from 9% to 28%, with China accounting for 89% of that growth. Over the same period, the share of US expenditure on Chinese goods rose from 0.6% to 4.6%, with a significant increase after China's accession to the WTO in 2001.

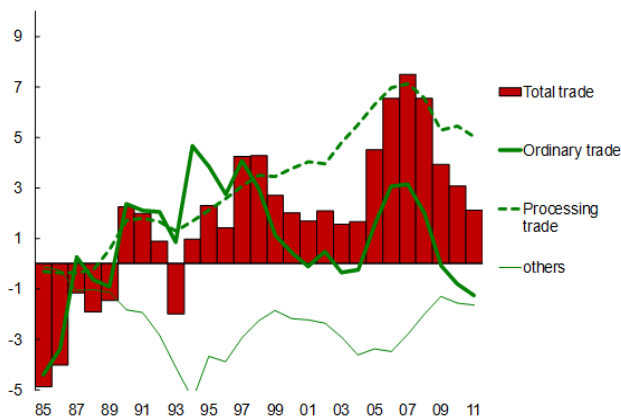
Contemporaneously, the share of employment in US manufacturing fell from 12.6% to 8%. Not surprisingly, Autor *et al.* (2013) find that rising import competition from China has resulted in higher unemployment, lower labor force participation, reduced wages, and increased transfer-payments such as unemployment benefits, in US labor markets where import-competing industries are located.

The increased global market involvement of China has been driven by its transition to a market-oriented economy, involving several factors. First, there has been rural-urban migration of over 150 million workers. This represents the largest internal migration in human history, with a quite dramatic rate of growth: by 1990, Cai (1996) estimates that 34.1 million rural Chinese workers had migrated to urban jobs, a number that increased to 140.41 million by 2008 (Chen *et al.*, 2010). This migration of workers from low-productivity agriculture to the high-productivity urban sector has been an important factor in China's rate of economic growth (Meng, 2012). Second, Chinese industry has been able to move closer to the technology frontier by gaining access to foreign technologies, capital and intermediate inputs (Hsieh and Klenow, 2009). Third, special economic zones (SEZs) have been critical in attracting foreign investment in export-orientated industrial enterprises, foreign-owned firms benefiting from duty-free treatment of imported inputs (Yang, 2012). Fourth, entry into the World Trade Organization (WTO) has enabled China to access the markets of all other member

countries due to it being granted most favored nation (MFN) status (Branstetter and Lardy, 2006). Gaining MFN status meant China was subject to the lower level of import tariffs bound by WTO/GATT members in previous rounds of multilateral trade negotiations.

As shown in figure 1, China also maintained a trade surplus averaging 5% of its GDP throughout the 2000s, contributing to global economic imbalances, and friction with countries with whom it continues to have a substantial bilateral trade surplus. For example, over the same period, the US has run a trade deficit accounting for 5% of its GDP. As a consequence, US politicians such as Senator Charles Schumer of New York have consistently argued that China's currency is intentionally, undervalued against the US dollar (*The Economist*, June 15, 2013).

**Figure 1: China's Trade Balance (% of GDP)**

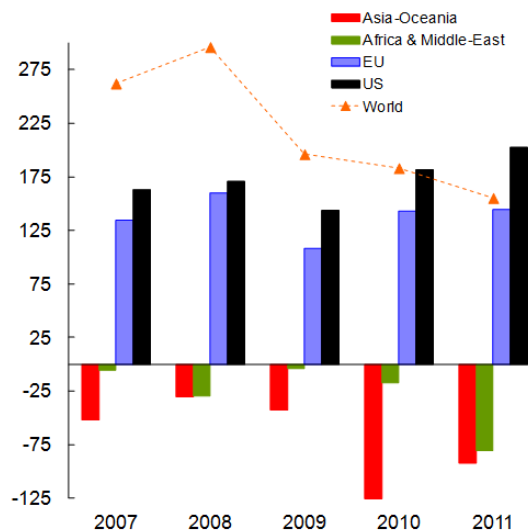


Source: Lemoine and Ünal (2012)

However, trends in China's exchange rate over the 2000s suggest that the growth in its trade surplus has not been the result of deliberate currency manipulation (Yang, 2012). From 1994 to 2005, China pegged its nominal exchange rate at 8.28 yuan to the US dollar, and during that period, it ran moderate trade surpluses averaging 2% or less of its GDP (see figure 1). In July 2005, the Chinese authorities relaxed the currency peg, and by 2012, the nominal exchange rate of the yuan to the US dollar had appreciated by 30%. Clearly this sizeable currency appreciation was insufficient to reverse the upward trend in China's trade surplus.

If not an undervalued currency, what has been responsible for the growth in China's trade surplus? The latter really took off following its accession to the WTO in 2001, peaking in 2007 and then declining as the global economy went into recession (see figure 1). This growth in the overall trade surplus was largely driven by multinational firms setting up labor-intensive export processing bases in China in order to service growing international demand (Upward *et al.*, 2010). Interestingly, China's "ordinary trade" also went into surplus during the 2000s as China built up production capacity in two capital-intensive sectors, machines and steel products (Lemoine and Ünal, 2012).

**Figure 2: China's Trade Balance by Regions (US\$ billion)**



Source: Lemoine and Ünal (2012)

Notwithstanding the post-recession decline in its overall trade surplus, China continues to run large bilateral trade surpluses with both the US and the EU, the former having rebounded above its pre-recession level, the latter having remained more or less unchanged (see figure 2). At the same time, China's bilateral trade deficits with other countries in Asia, and Africa and the Middle-East have actually widened. In the case of the former, China is part of "factory Asia", whereby China imports intermediate inputs from neighboring countries and then exports finished goods to the rest of the world (Baldwin and Carpenter, 2010). As regards the latter, China has significant import demands

for energy (oil) as well as other raw materials (copper, iron-ore, nickel and tin). China is currently Africa's largest trading partner, with raw material exports playing a significant role in half of sub-Saharan Africa's 45 countries (*The Economist*, September 21, 2013)

### **China's Competitive Advantage**

China has developed a pronounced competitive advantage in industries that intensively use labor in production (Amiti and Freund, 2010). For example, by 2007, China accounted for 40% of US imports in luggage, rubber and plastic footwear, and games and toys, and over 30% of US imports in industries such as apparel, textiles, furniture, leather goods, electrical appliances and jewelry (Autor *et al.*, 2013).

China's competitive edge in labor-intensive industries has partly been due to the availability of cheap labor. As a result, multinational firms have outsourced assembly to China, triggering fast employment growth and rural-urban migration.

At the start of China's economic reforms in the late-1970s, the annual wage of Chinese urban workers was a mere \$1004 – 3% of the average US wage at the time, and considerably lower than other Asian countries such as the Philippines and Thailand. By the end of the 2000s, average wages had risen to \$5,487, an increase of 13.8% per annum over the period 1998 to 2010, outstripping China's average real GDP growth rate of 12.7% per annum, and pushing Chinese wages above other developing Asian economies such as Thailand, Indonesia and India (Li *et al.*, 2012). If this growth continues, average real Chinese wages will rise to \$20,000 by 2020, a level reached by the US in 1980 and by Japan in 1986 (Li *et al.*, 2012).

This increase in wages has the potential of reducing China's competitive advantage. According to *The Economist* (June 15, 2013), labor costs are rising faster in China compared to its major trading partners. Weighting China's trade with the US, the euro area, and Japan, and accounting for unit labor costs in each of the four economies, China's real exchange rate has strengthened by almost 50% over the past decade. As a result, in the future, multinational firms involved in "factory

Asia" may outsource production to lower wage countries such as India and Vietnam.

### **Why Rising Wages in China?**

There are three key explanations for China's rising wages (Li *et al.*, 2012). First, reforms to urban labor markets have meant the private sector is now setting industrial wages such that there is a much stronger connection between wages and productivity. Under central planning, workers were allocated to state-owned enterprises (SOEs), jobs being permanent with minimal mobility, wages reflecting seniority rather than productivity. In the late-1980s, the Chinese government undertook a series of reforms, initially allowing profitable state-owned enterprises (SOEs) to pay higher wages to more productive workers, followed in the mid-to-late 1990s by privatization of SOEs as well as private firms receiving legal status. As a consequence, millions of workers laid-off by SOEs moved to the private sector, and at the same time large scale rural-urban migration was allowed. The net result was the establishment of an external labor market that more efficiently allocates workers to jobs where wages better reflect their productivity.

Second, there has been a significant demographic transition in China from high to low birth rates. Between 1950 and 1978, the total fertility rate was 5.2 births per woman, and despite the famine that resulted in an estimated 30 million deaths during the "Great Leap Forward" between 1959 and 1961, China's population increased from 552 to 963 million. With implementation of the "one-child policy" in 1978, together with other social and economic changes, China's total fertility rate fell to only 1.4 births per woman by 2010. The speed and magnitude of this transition created the so-called "demographic dividend" whereby a large share of the Chinese population has been in their prime working years, with relatively few children and elderly people. As a consequence Chinese economic growth has benefited from a large proportion of its population being in the workforce, along with a low dependency ratio, and a high savings rate. However, this very same transition also means that with a low birth rate, China's labor force growth has slowed down over the past decade, with the potential of contributing to rising wages.

Third, the growth rate of rural-urban migration is slowing down, influenced by both the *hukou* system, whereby every Chinese citizen's residency status - rural or urban - is dictated by their place of birth, and the fact that those who can migrate at lowest cost, have already done so. Even though rural residents have been allowed to migrate to the cities since the mid-1990s, they are unable to take advantage of urban public services such as education, unemployment and medical insurance, housing, and pensions because of their *hukou* status, thereby raising the costs of migration, especially for older migrant workers.

A result of this distortion to labor markets has been the simultaneous surplus of labor in rural areas and rising rural migrant wages in urban areas as labor shortages have begun to occur, especially in China's coastal areas such as the Pearl River Delta and the Yangtze River Delta. In addition, more migrants are staying closer to home in an effort to reduce their migration costs, and also encouraged by some export processing firms moving their assembly plants inland. However, Li *et al.* (2012) consider that inland migration of firms will be fairly limited due to increased geographic agglomeration around the coastal SEZs, which has resulted in increasing returns to scale and the benefits to locating firms of backward and forward linkages with input suppliers and downstream markets, and the associated external economies of scale.

### **Has China Hit the "Lewis" Turning Point?**

The increase in average real wages in China has provoked much discussion of whether China has reached what is referred to as the "Lewis" turning point, named after the economist W. Arthur Lewis (1954). Paul Krugman recently described the logic of this argument in his newspaper column (*New York Times*, July 18, 2013). Currently, investment in China runs at over 48% of its GDP, while consumption stands at about 36% of GDP. Krugman asks "...what keeps consumption so low, and how have the Chinese been able to invest so much without (until now) running in to sharply diminishing returns?"

Lewis (1954) argued that emerging economies such as China in their early stages of development have a small manufacturing sector alongside a traditional rural sector

containing surplus labor. The surplus rural labor has two effects: first, the country can invest in the manufacturing sector without diminishing returns to capital as it can keep drawing on rural labor; and second, the availability of surplus labor ensures wages remain low, even as the economy grows. Krugman claims that China has hit the turning point with wages rising. As a consequence, investment now needs to be in the form of "capital deepening", whereby more capital is added to each individual worker as opposed to "capital widening" where the capital per worker remains constant (*The Economist*, August 17). In addition, there needs to be a significant increase in Chinese consumer spending.

While there is little doubt that China's economy is in need of rebalancing, it is not clear that China has in fact reached the Lewis turning point. Knight *et al.* (2011) indicate there is actually contradictory evidence: on the one hand, Cai *et al.* (2007), and others argue that the Lewis turning point has already been reached, as evidenced by rising migrant wages. Others have argued that migrant wages have either not increased that much (Du and Pan, 2009) or that there is still evidence of widespread surplus labor in rural China (Kwan, 2009). Knight *et al.*'s (2011) view is that the evidence for simultaneous surplus rural labor and rising rural migrant wages in urban areas is inconsistent with the Lewis model, and that such an outcome is being driven by the constraints imposed on rural-urban migration by the *hukou* system.

### **Chinese Labor Productivity**

While there is clear evidence for rising wages in China, its competitive edge also depends on its productivity, and its ability to move up the technological ladder. Over the past decade labor productivity has been increasing at 11.3% per annum (Li *et al.*, 2012). This has been partly due to increased investment in R&D by manufacturing firms, expenditures per worker increasing at an annual rate of 16.9% over the past two decades. In addition, there has been capital deepening, the amount of physical capital per worker increasing to \$94,240 in 2010. In addition, greater access to college education has raised the quality of Chinese labor, which is also being reflected in the returns to education (Li *et al.*, 2012). In

the late-1990s, China pushed to expand university enrollment, with numbers rising to 6.6 million by 2011, with predictions that 40% of the Chinese population will hold a university degree by 2050. In combination with reforms to the labor market, increased labor quality is strengthening the link between wages and productivity, the return to college education in China reaching 49% by 2009, higher than the average rate of return of 40% in developed economies (Li *et al.*, 2012).

If productivity growth continues, it is likely China will eventually switch to manufacturing more skill-intensive, and higher value-added goods. It is well-documented that since the early-1990s, China has been moving into producing and exporting more sophisticated products such as cellphones and computers, and at the same time moving out of children's toys and games, and footwear (Hanson, 2012). However, there is debate about the extent to which China is actually capturing more links in global production chains. Amity and Freund (2008) argue that once export processing is accounted for, the skill content of China's exports has not been increasing. In contrast, Hanson (2012) documents that China's exports of computers and computer parts have grown more rapidly than it imports of intermediate inputs in the sector, suggesting that China is increasing the skill content of its exports and beginning to capture more value-added in production. Lenovo, who acquired IBM's personal computer (PC) business in 2005, is regularly touted in the media as an example of China's shift into production of more technologically sophisticated products. For example, Eric Pfanner (*The New York Times*, December 26, 2013) recently reported that Lenovo is currently ranked as the world's largest seller of PCs. Also, while 90% of its mobile phone sales are domestic, making it the second-largest producer of smartphones behind Samsung, it has also aggressively entered export markets in Indonesia, India, the Philippines, Russia and Vietnam.

It should be noted, however, that there is a growing divide between rural and urban education opportunities that has important implications for China's ability to transition to a skill-intensive economy (Meng, 2012). First, reforms in the rural economy had a significant impact on supply of education in the countryside, that had originally been one of

the functions of the rural communes, and which was not replaced by adequate public provision. Second, the policy to expand university enrollment has benefited urban areas much more than rural areas. Meng (2012) argues that as China's economy continues to grow and it moves closer to the technology frontier, it will require a more educated labor force, much of which will have to come from those with rural *hukou*. If public investment in rural education continues to lag such that rural migrants are unable to fill skill-intensive urban jobs, it will slow down China's urbanization, increase rural under-employment, and exacerbate the rural-urban income gap.<sup>1</sup>

### Possible Reforms

Irrespective of increased productivity, if China wants to transition smoothly to a more skill-intensive, middle-wage economy, labor and rural land market reforms are essential. Restrictions on rural-urban migration should be removed along with establishment of land ownership rights allowing farmers a way to sell up in the countryside, and thereby lowering the cost of migration to urban areas. However, there are significant constraints to such reforms: first, holders of urban *hukou* want to maintain their preferential access to jobs, education and healthcare; and, second, city governments cannot currently afford to extend public services to rural migrants, the Chinese Development Bank recently estimating that it would take \$8.2 trillion by 2020 to accommodate new rural-urban migrants and to provide increased social benefits to those that have already migrated (*The Economist*, June 1, 2013)

Holders of rural *hukou* also have higher savings rates than those who hold urban *hukou*, and are therefore a potential source of increased consumption – releasing such potential is a necessary step in rebalancing of the Chinese economy.<sup>2</sup> This however requires that rural land and ownership rights be established, allowing farmers to sell up and migrate to the cities. Collective ownership of land is still enshrined in the Chinese

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<sup>1</sup> Henderson (2009) documents in detail the extent to which China is already under-urbanized.

<sup>2</sup> At the national level, the household savings rate in China accounted for 23% of its GDP by 2008.

constitution, and many local party officials are unwilling to allow private property rights to replace the existing system of 30 year leases, as it would hinder local government's ability to appropriate and sell land for development, a key source of local-government revenue (*The Economist*, November 2, 2013). Estimates indicate that between 1990 and 2010, government had expropriated 16.5 million acres of rural land, paying farmers \$326 billion below its market value (*The Economist*, June 1, 2013).

As with previous economic reforms in China, there have been some local experiments relaxing collective land ownership, e.g., farmers in Guangdong province and the Chongqing region have been allowed to mortgage their homes, and in Zhejiang province, a clearing house has been set up to allow urban residents to purchase houses from villagers.<sup>3</sup> Although this type of reform has not yet been scaled up by the Communist Party, much has been made of the recent third plenum of the 18<sup>th</sup> Central Committee, from which a document was released hinting at more experimentation in trading rural land, reduction of barriers to migration and relaxation of the "one-child policy" (*The Economist*, November 16, 2013).

Changes to the "one-child" policy have grabbed the attention of the media, but it is not clear whether this would actually solve the problem of migrant labor shortage in urban areas. Meng (2012) notes that while the policy has been strictly enforced in urban areas, in rural areas, a second, and even a third child has been allowed if the previous births were girls. Careful analysis of the population pyramid indicates that while the rural *hukou* population shows a low number of births between the early 1970s and mid-1980s, the period over which the "one-child" policy started taking effect, this was more an "echo" effect of the famine between 1959 and 1961. The conclusion Meng (2012) draws is that the "one-child" policy did little to reduce birthrates among those with rural *hukou*. In

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<sup>3</sup> Regional experimentation has been a key to China's central decision-making process since the onset of its economic reforms (Xu, 2011). The "household responsibility system" is an early example of this in action, land reforms in the late-1970s being initiated locally in Anhui, Guangdong and Sichuan provinces and subsequently adopted at the national level.

addition, even though the urban population clearly started shrinking at the time the "one-child" policy was introduced, as more than 70% of China's population has rural *hukou*, the limited effect of the policy dominates. Consequently, given that China's labor force will have to be drawn predominantly from rural areas, the problem is clearly one of constraints on migration as opposed to actual migrant labor shortage. In addition, China needs to increase its educational investment in rural areas in order to increase the skill level of rural labor.

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*Andersons Policy Bulletins are discussions of key trade and policy issues. The author of this bulletin, Ian M. Sheldon, is Andersons Professor of International Trade in the Department of Agricultural, Environmental, and Development Economics within the College of Food, Agricultural, and Environmental Sciences at The Ohio State University.*

#### **Questions or comments?**

**e-mail:** [sheldon.1@osu.edu](mailto:sheldon.1@osu.edu)

**web-page:** <http://aede.osu.edu/programs-and-research/andersons-program>