

Research Focus

Global Production Sharing and US-China Trade Relations

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Over the past decade the widening US-China trade deficit has been the focal point of bilateral economic relations, and has often been portrayed as a cause of overall US current account imbalances. Real public concerns are, however, rooted in the perceived economic threat of import competition from China. 'Unfair' import competition is perceived to take a number of forms, including illegal export subsidies, lax enforcement of intellectual property rights, restrictions on imports and foreign investment in China, and undervaluing the national currency through massive intervention in the foreign exchange market. These concerns have fueled calls for new legislation to prevent unfair practices. In February 2005, the US Senate passed the Byrd Amendment, encouraging American companies to file anti-dumping lawsuits by awarding revenue collected from the resultant tariffs to litigating companies. Other China-specific legislation proposed since then includes a bill declaring exchange rate protection to be an illegal subsidy for which US firms can seek compensation. The China threat, in particular the loss of US jobs to China was a hot issue in the 2000 and 2004 presidential elections, and is likely to figure just as prominently in the 2008 presidential campaign.

So far policy debate on US-China trade relations has reflected the conventional notion that countries trade in goods that are produced from start to finish in just one country ('horizontal specialisation') (that

is, China exports laptop computers to the United States and, in exchange, United States export Boeing 747s to China). It has ignored the ongoing process of global production sharing—the breakup of the production processes into geographically separated stages. Global production sharing creates opportunities for countries to specialise in different slices (different tasks) of the production process depending on their relative cost advantage and other relevant economic fundamentals. Decisions about how much to produce and for which market are combined with decisions about whether to produce and with what degree of intra-product specialisation. So, trade flow analysis based on data from a reporting system designed when countries were trading only in final goods naturally leads to a falsification of current account imbalances. The degree of falsification will increase as more complex production networks are created with an ever increasing number of interacting countries.

To illustrate the point, almost a third of laptops traded worldwide now originate in China and 75 per cent are 'produced' by a fully-Taiwanese owned firm, **Quanta Shanghai Manufacturing**. Quanta is a 'contract manufacture' assembling computers for big US-based computer companies such as Hewlett-Packard and Dell according to their designs. Micro processors in these computers, designed in the United States, are assembled in Southeast Asia by Intel Corporation; graphic chips designed by ATI Technologies Inc, Ontario, Canada are assembled in Taiwan; liquid-crystal-display screens and memory chips are produced in Taiwan and Korea; hard **drives are sourced** from Japan; and operating systems are from Microsoft in the United States. China's contribution in the value chain is nothing

more than Chinese labour which amounts to around 5 per cent of the market value. Yet, the full value of a laptop imported from China is a direct addition to the US trade deficit!

Bilateral trade between the United States and China has grown persistently since the early 1980s, accelerating from the mid-1990s and again after China's accession to the WTO in 2001. Exports from the United States to China too have grown persistently during this period, but from a low base and at a slower rate. Bilateral economic ties between the two countries have therefore been characterised by a steadily growing trade imbalance. In 2006, the US deficit with China (US\$205 billion or 1.9 per cent of GDP) was its single largest bilateral trade deficit ever recorded.

The widening bilateral US deficit with China is counterbalanced by sharp declines in bilateral trade deficits with Japan and other East Asian Countries. Between 1999 and 2006, the increase in China's share of the total US trade deficit—from 20.4 per cent to 28.4 per cent—was accompanied by a decline in the comparable figure for Japan—from 21.1 per cent to 10.5 per cent—and other East Asian countries declined—from 16 per cent to 10.3 per cent. On the China side, the widening China-US trade surplus since 1998 was accompanied by growing deficits with Japan and other East Asian countries. From 2004 to 2006, China's combined deficit with Japan and other East Asian countries amounted to 85 per cent of the China-US trade surplus. In fact, China has had an overall trade deficit with the world, excluding the United States, for several years now.

Narrowing US trade deficits and widening Chinese trade deficits with the rest of East Asia are both closely associated with China's increasingly important role as the main centre of final assembly within regional

production networks. When China's reforms began, export-oriented firms in Hong Kong, Taiwan and Korea involved in conventional labour-intensive industries such as clothing, footwear, toys and travel goods, relocated production to China. This was followed, from about the early 1990s, by rapid relocation in China of final assembly stages of 'high-tech' industries—in particular, communication and information technology (CIT) industries from these countries, Japan, the United States and other developed countries. US multinational firms with production bases already established elsewhere in the region, particularly in Southeast Asia, began to participate extensively in these production networks as suppliers of parts and components for final assembly activities in China. This massive restructuring of production processes within global production networks eventually shifted China's growing bilateral trade surplus with the United States (and some other developed countries) to China's regional trading partners, in the form of narrowing trade deficits and/or growing trade surpluses.

Disaggregated trade data shows that the share of parts and components in US exports to China is much higher (over 60 per cent) than that in US imports from China (less than 20 per cent). Moreover, these import shares have recorded notable declines across all US import trading partners, which are even sharper for CIT products. These patterns are generally consistent with US comparative advantage in skill/capital-intensive production within global production networks in vertically integrated industries. Furthermore, the share of parts and components in US exports to other East Asian countries is much higher than that of US exports to China. This is consistent with case study findings that US firms located in East Asia undertake further processing/assembly of parts and components originally designed/produced in the United States as part of their engagement in China-centered regional production networks.

In sum, in the contemporary world where global production sharing is expanding rapidly, the real story behind the US-China trade gap is much more complicated than

standard trade data suggests. The widely-held view that China's rapid penetration of the US market is driven by unfair trade practices needs to be reexamined, given that the two economies are deeply interconnected and interdependent within global production networks. Growing trade deficits between the two countries are underpinned by China's emergence as the final assembly point in Asian production networks based on its ample supply of labour and decisions by US firms to supply high-end parts and components from their Asian bases. Thus, this deficit is largely a structural deficit driven by the process of global production sharing. It is akin to the substantial structural deficits with the oil exporting countries (driven by their specific resource endowment), with which the rest of the world has grown accustomed to live. The difference is that the 'China deficit', unlike the 'oil deficit', contributes importantly to industrial adjustment and productivity growth in the United States.

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Events	Publications	New Book
<p>5 August, <i>Behind the wheel of Toyota's success</i>, Yoshio Ishizaka, Advisor, Toyota Motor Corporation, Public Lecture, 5.00pm, Finkel Lecture Theatre, John Curtin School of Medical Research, ANU</p>	<p>Asia Pacific Economic Papers 373, <i>Can the new Antimonopoly Act change the Japanese business community?</i>, Kazukiyo Onishi</p>	<p><i>China's Dilemma: economic growth, the environment and climate change</i>. Ligang Song and Wing Thye Woo (eds) 442pp (incl. index) RRP A\$50 ISBN 978 0 7315 3819 5</p>
<p>19–20 September, <i>Indonesia Update: Indonesia beyond the Water's Edge: Managing an Archipelagic State</i>. For more information, please visit the website: http://rspas.anu.edu.au/economics/ip/IU08/</p>	<p>Crawford School Policy Briefs <i>The Credit Crunch</i>, Patrick de Fontenay, Jenny Corbett, Stephen Grenville and Timo Henckel, 6.</p>	<p>Published by Asia Pacific Press, Brookings Institution Press, Social Sciences Academic Press (China) and ANU E Press. Available from ANU E Press http://epress.anu.edu.au/</p>
<p>22–23 September, <i>Comparative Experience in Competition, Policy Reform: Australia, Japan and East Asia</i>, conference, ANU</p>	<p>This policy brief provides important insights for understanding the causes and effects of the sub-loan crisis, its impact on Australia and our neighbors, and possible approaches to avoid it happening again.</p>	<p>Asia Pacific Press publications can be ordered online at http://www.asiapacificpress.com or by contacting Landmark Educational Supplies, Ph: 03 5625 4290, Fax: 03 5625 3756, book.distribution@elandmark.com.au</p>
<p>Crawford Seminars</p>	<p><i>Policy Innovations</i>. Ralph Lattimore, Joshua Gans, Bruce Chapman and Tim Higgins, 7 (forthcoming)</p>	<p>APEC Economies newsletter mailing list enquiries:</p>
<p>5 August, <i>Alert but not alarmed: using real options to adapt more cleverly to climate change</i>, Leo Dobes, Crawford School</p>	<p><i>Foreign Direct Investment</i>, Emma Aisbett, Ligang Song and Chunlai Chen, 8 (forthcoming).</p>	<p>Australia-Japan Research Centre Tel: (61-2) 6125 3780 Fax: (61-2) 6125 0767 Email: ajrc@anu.edu.au</p>
<p>19 August, <i>Does foreign direct investment cause more pollution in China?</i>, Ligang Song, Crawford School</p>	<p>http://www.crawford.anu.edu.au/research/papers.php</p>	
<p>**Seminars are held at 12.30pm in Seminar Room 4, Crawford Building</p>		