

Research Statement
Reappointment Case for Chang Hong
Department of Economics, Clark University
URL: <http://www.clarku.edu/faculty/chong/>
Email: chong@clarku.edu

My research interests are in the fields of international trade and economic development, with a focus on the largest developing economy, China. I have carried out research that theoretically and empirically examines the impact of trade liberalization on a country's economy, such as employment, wage inequality, regional specialization, and industry protection. I also study macroeconomic issues involved with trade.

I. Impact of Trade Liberalization on Chinese Economy

The theory of comparative advantage says that nations prosper by focusing on what they do best and trading with other countries that have different strengths. Since China has taken important steps to actively promote trade liberalization in the past three decades, it is natural to expect that China will reveal a pattern of specialization with rapid trade expansion. However, previous research cannot reach consensus on this. My paper "*Trade Liberalization, Wages, and Specialization in China*" studies the regional specialization pattern in China using a panel of Chinese export data at the detailed commodity level. Instead of a monotonic relationship commonly found in previous literature, I show that both China's inland and coastal areas follow a U-shaped pattern of specialization: they diversify from 1988 to 1994, but specialize afterwards. To explain this observation, I propose a theory of tariff reduction and construct a Dornbusch-Fischer-Samuelson-type continuum of goods Ricardian model in a setup of two countries and three regions. From the model, a U-shaped specialization pattern can be obtained by removing foreign trade barriers followed by slashing Chinese tariff rates. The insight is that changing tariff rates will readjust regional comparative advantage and hence the range of the overlapping non-traded products inside a country. This paper also finds that the coast to inland wage gap in China can be alleviated by a home tariff reduction, but exacerbated as foreign trade barriers dismantle. Sufficient empirical evidence is provided to support the model predictions. This paper confirms the standard two-country Ricardian model result that countries as a whole will always specialize and gain from trade. It further contributes by finding that inside a country, however, the sub-regional pattern of specialization will differ with respect to where the tariff reduction dominates.

Despite the fact that a country gains from trade overall, there are always winners and losers in the game of trade. That's why there is still so many opposition to free trade, and governments have always tried to protect certain sectors from import competition, despite their commitment to free trade. In China, the state-owned enterprises (SOE) make up a substantial part of the national economy and have constantly received government preferential support¹. My second paper "*The Political Economy of Tariff Protection in China: Evidence from WTO Accession*" studies whether the Chinese government will continue protecting its economic pillars after its entry to the WTO. I derive a model where a central government chooses an optimal tariff rate so as to maximize the national welfare, which is a weighted sum of consumer welfare, profits of domestic enterprises, tax revenue from the multinationals, and tariff revenue collected from imports. The model predicts that a government would set a high tariff rate for an industry that has large SOE or multinational share, but a small foreign import share. Then I

¹ Though economic restructuring has caused a sharp decline of manufacturing employment in the SOE, they still controlled over 50 percent of the total industrial assets in China at the end of 2008, according to China's industrial survey.

estimate the model using the binding tariff rates that China committed to the WTO. The results indicate that although Chinese government has reduced its interference under trade liberalization, it still favors the SOE over consumers. This finding is quite the opposite from a democratic economy, where consumers usually receive a larger weight. However, it is consistent with the pattern of economic reform in China. Currently, this paper has been invited revise and resubmission at the *Canadian Journal of Economics*.

II. Trade and Macroeconomic Issues

My second line of research addresses some heated macroeconomic issues related to China's trade. In joint work with Robert Feenstra ("*China's Exports and Employment*"), we study whether China deliberately stimulates exports as a means to support employment and job creation. China's total employment increased by 7.5-8 million per year over 1997-2005. By studying the two overlapping five year intervals of 1997-2002 and 2000-2005, we find that exports have become increasingly important in stimulating employment in China, but that the same gains could be obtained from growth in domestic demand, especially for tradable goods, which has been stagnant until at least 2002. This paper was published in the NBER conference volume *China's Growing Role in World Trade*. Our policy suggestion that China should rely more on stimulating domestic demand has received wide attention. The Chinese government has actually launched a broad range of domestic investment and consumer stimulus programs since 2008.

Besides job creation, I explore China's trade response to exchange rate with co-authors Shang-Jin Wei and Caroline Freund. Since its economic opening, China has pursued a dual trade regime: ordinary trade and export-processing trade. Ordinary trade is the traditional type of trade close to arms-length transactions. In contrast, the export-processing regime grants firms duty exemptions on imported raw materials and other inputs as long as they are used solely for export purposes. Many foreign firms have taken advantage of this regime to slice up their value chain and move their labor-intensive final-assembly stage to China. Since export-processing trade involves significant global sourcing and contains less domestic content, we argue that it is less sensitive to Renminbi (RMB) exchange rate shocks than ordinary trade. Using highly disaggregated bilateral imports and exports between China and its trading partners in the world, we find that China's imports and exports respond to exchange rate and relative income movements in our anticipated manner. At the aggregate level, the elasticity of exports to the real exchange rate is close to unity, whereas imports are less sensitive. Under different trade regimes, processing exports are significantly less responsive to the exchange rate than ordinary exports; but the distinction between processing and ordinary imports is not significant. Our evidence suggests that extra caution is needed when using trade elasticities to estimate how an appreciation of the Renminbi would affect the U.S. trade deficit with China.

In "*China's International Competitiveness: Reassessing the Evidence*" with Ari Van Assche and Veerle Sloomackers, we continue to analyze China's dual trade regime and its implication to China's international competitiveness. There has been increasing concern that China is rapidly moving up the technology ladder and threatening the global competitiveness of high income countries. We demonstrate that more than half of China's export value is attributed to export-processing trade. Aggregate export data does not necessarily reflect the value produced in an exporting country, but rather captures the gross value of the products that leave a country's ports. Hence aggregate export data leads to an upward bias in both the perceived quantitative and qualitative threats to the Western economies. This paper was published as a book chapter.

III. Drivers of China's Export Growth

In a third line of inquiry I focus on the drivers of China's rapid emergence as an export powerhouse. Recent research has demonstrated the importance of institutional quality at the country

level for both the volume of trade and the ability to trade in differentiated goods that rely on contract enforcement. In a paper “*Contractual Versus Non-Contractual Trade: The Role of Institutions in China*” joint with Robert Feenstra, Hong Ma, and Barbara Spencer, we take advantage of cross-provincial variation in institutional quality in China, and export data that distinguishes between foreign and domestic exporters and processing versus ordinary trade. We show that institutional quality is a significant factor in determining Chinese provincial export patterns. Institutions matter more for processing trade, and more for foreign firms, just as we would expect from a greater reliance on contracts in these cases. We also find evidence that China’s dramatic export rise can be attributed to its aggressive export promoting policies and export processing zones.

Why do firms offshore manufacturing to China? Besides its low labor costs, does China’s geographic location play any role on its stellar export growth? In paper “*Global Production Networks and China's Processing Trade*” with Alyson Ma and Ari Van Assche, we argue that a hidden driver is the country’s geographic proximity to its East Asian neighbors. Using data from China’s processing trade regime, we unveil a systematic pattern: in a cross-section of Chinese provinces, the average distance traveled by processing imports (import distance) is negatively correlated with the average distance traveled by processing exports (export distance). To explain the pattern, we set up a three-country industry-equilibrium model with heterogeneous firms. This paper provides new insights into China’s role in world trade by relating China’s geographical location to its processing trade patterns. It was published in *Journal of Asian Economics*, November 2009.

IV. Cross Country Studies

China’s experience will certainly be helpful in comparative economic analysis. In a planned ‘Indonesia 2049’ project “*Indonesia’s Economic Performance in Comparative Perspective, and a New Policy Framework for 2049*” with Wing Thyee Woo, we compare Indonesia’s economy with those of two oil exporters (Mexico and Nigeria), three large populous developing economies (China, India and Brazil) and three Southeast Asian neighbors (Malaysia, Thailand and the Philippines). By conducting cross-country analysis over various macroeconomic and microeconomic dimensions, we found that Indonesia’s economic performance under Soeharto was better than it had been under Soekarno, and above the average of the eight comparator countries, but below that of the East Asian economies. Our view is that Indonesia must adopt a new economic policy framework to ensure successful transition to knowledge-based growth. This paper was published in “*Bulletin of Indonesian Economics Studies*” 2010.

In another paper “*Unit Values in International Trade and Product Quality*,” I study the cross-country variation in export prices. A country’s export price is decomposed into the components associated with pure term-of-trade effect, quality effect, distance effect, and production cost effect. By constructing a complete data set of world bilateral trade flow, wage, and tariff rates from 1964 to 2004 for over 700 industries and 115 countries, I confirm that tariff rates, country distance, and wage rates all significantly influence the unit values. Furthermore, I show that quality is an important factor that drives up the unit values: exporters increase unit price to distant trading partners through quality upgrading. This “Washington apple effect” is much larger than the pure distance effect or production cost increase.

Looking forward, I anticipate extending my research along these research lines. In recent years, the emergence of firm level trade data sets has allowed trade economists to investigate a wide array of hypotheses. I have also started examining China’s trade pattern at the firm level. Based on my current research on trade and exchange rate, I plan to study firms’ behavior of pricing to market. I will also look at the productivity gains of firms under trade liberalization.