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The Fight for the Middle: Upgrading, Competition, and Industrial Development in China

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Summary. — When China acceded to World Trade Organization (WTO) in 2001, there were fears that Chinese firms would lose market share in key sectors to foreign-invested enterprises (FIEs). Although aggregate data often indicate a shift in favor of FIEs, indigenous firms in many cases have slowly increased market share and deepened their technical capabilities. Through an analysis of aggregate data and three sectors, we show how the dynamics of competition between Chinese and FIEs in China's domestic market enhance the upgrading prospects for Chinese firms. China represents a new model of development in several important respects: industrial upgrading efforts are often domestically driven, within this domestic market there is intense competition between both domestic and foreign firms, and this competition is driving and stimulating the upgrading efforts of domestic firms.

Key words — China, industrialization, FDI, upgrading, emerging markets, automotive

1. INTRODUCTION

China represents a new model of development in several important respects: industrial upgrading efforts are often domestically driven, within this domestic market there is intense competition between both domestic and foreign firms, and this competition is driving and stimulating the upgrading efforts of domestic firms.

Although exports have been critical to China's growth, a key dimension of the upgrading process lies in the interaction between domestic firms and foreign-invested enterprises (FIEs) that are competing in China's domestic market, a market that for some key sectors has grown four to fivefolds in the last decade. Unlike smaller developing countries, the huge size of the Chinese market has provided ample room for entry and expansion in many sectors without the need for domestic firms to immediately launch themselves into global markets. Unlike countries that exploited large and protected markets before shifting outward, China has been much more open to foreign direct investment (FDI) and has become tightly integrated with the global economy. Within the domestic Chinese market, intense competition—a product of the lower tariff barriers and entry by both foreign-invested and domestic firms leading up to and following China's accession to the World Trade Organization (WTO)—has raised the threshold level of capability that domestic firms must achieve in order to survive and has forced foreign firms to localize activities in order to cut costs. This competitive pressure expands and deepens the channels through which Chinese firms can build and upgrade their capabilities.

Industrial upgrading was not a widely anticipated outcome of WTO accession. During the first two decades of the reform period, China's central government struggled to tilt the terms of competition within the domestic marketplace in favor of indigenous Chinese firms. High tariff barriers shielded the market from global competition; foreign firms that sought access to the domestic market were pushed to transfer technology to Chinese partners, and strict domestic content requirements were the norm in many sectors. When China finally acceded to the World Trade Organization (WTO) in 2001, some policy-makers in Beijing feared that liberalization was happening too quickly. Chinese firms were not yet prepared for the rigors of global competition and the critics of the accession agreement worried that as tariff barriers fell, domestic Chinese firms would rapidly lose market share to their global competitors.

In this paper we argue that the worst of these initial fears were not realized. Following entry into WTO, market competition increased significantly, and overall, Chinese firms lost market share. However, indigenous firms gained market share in many sectors, and even where they lost, they have often deepened their capabilities in the course of making the transition into higher value added parts of the value chain. We provide evidence of this success and offer an explanation for it.

The argument is at three levels—the aggregate level of the entire Chinese domestic market, the level of individual sectors, and the value chains within these sectors—and the type of data we utilize varies by level. As a first step, we analyze estimates for the entire Chinese domestic market constructed on the basis of data from China's Industrial Census and trade statistics in order to assess trends in the relative market share of domestic firms, FIEs, and imports over time. [1] The aggregate data

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indicate an increase in the market share of foreign firms over the period spanning China's WTO accession. There are many sectors where domestic firms increased market share, but in the aggregate, these gains are offset by those sectors in which domestic firms lost ground.

In a second step, we analyze data for three sectors in which it appears that domestic firms lost market share after WTO accession—presumably the hard cases to show evidence of domestic upgrading—and argue that the aggregate data mask significant upgrading within the sectors. When these sectors are broken down by market segment, analysis at the OEM (original equipment manufacturer) level, that is, firms producing final products, makes clear that domestic firms dominate at the low-end of the market, where consumers are relatively indifferent to quality and firms compete on the basis of price, and foreign firms dominate at the high-end, where consumers are less sensitive to price and quality is critical. Moreover, significant barriers to entry prevent each from easily encroaching on the share of the other: domestic firms rarely have the deep know-how to design, manufacture and market products to compete with foreign firms in the high-end and foreign firms are rarely able to meet the price points demanded by consumers in the low-end of the market. We provide evidence, however, that domestic firms are increasingly capable of competing with foreign firms for the middle of the market, which is becoming the largest and the most rapidly growing segment within these industrial sectors.

It is the fight for the middle that deepens the channels of upgrading for domestic firms in China: domestic firms strive to upgrade their product through improvement in design and manufacturing methods in order to escape the intense competition at the bottom while foreign firms seek to decrease costs in order to capture the rapidly growing market segments in the middle. The supply chain plays a central role. The cost-cutting efforts of foreign assembly firms lead them to localize their operations more aggressively than would otherwise be the case, and their localization efforts provide a new range of upgrading opportunities for Chinese supply firms. The upgrading efforts of domestic assembly firms lead them to seek out the most capable domestic suppliers in order to draw upon the combination of low-cost and strong manufacturing capabilities. Although we do not have systematic evidence of this dynamic (i.e., a comprehensive sector-wide benchmarking study), we supplement data from industrial yearbooks and other sources with information that was collected during extensive visits with leading firms (both assemblers and suppliers) in each of the three sectors. This allows us to provide illustrative examples of the localization and upgrading dynamics of key components in each sector.

In the next section of the paper we place our argument in the context of two of the dominant approaches to industrial upgrading in East Asia. In the third section we analyze the dynamics of competition in the Chinese domestic market at an aggregate level and explain why a more fine-grained analysis is necessary. Each subsequent section analyzes a particular market segment, namely, the bottom, the top, and the middle.

2. FROM EXPORT-LED GROWTH TO DOMESTIC-LED UPGRADING

An outward orientation has been a crucial element of the East Asia developmental model, and the primary theoretical frameworks for understanding industrial upgrading have focused on how governments and firms prepare for competition in global markets.

One of the most influential frameworks is that of the developmental state. As Alexander Gerschenkron (1962) argued in his classic study of late 19th century industrial development in Germany, the institutions of the state must assist industries that are technology and capital-intensive in their efforts to acquire the most advanced technology. The most influential explanations of rapid growth in East Asia follow closely from Gerschenkron's logic.[2] Japan (Johnson, 1982) and Korea (Amsden, 1989; Kohli, 2004) provide classic examples of an elite and coherent bureaucracy working closely with private business to formulate and implement a strategic development policy. Large business groups were granted protection and preferential access to capital by the state, which they leveraged in the domestic market to build capabilities, diversify into a broad range of industrial capabilities, and prepare for an outward push into global markets. Within the domestic markets there was competition, but it was overwhelmingly between domestic firms: FDI was limited and the preferred means of acquiring foreign technology was through licensing agreements and technical cooperation agreements.[3] Scale and scope were critical to this model. They translated into cost-savings (due to fuller capacity utilization and lower sourcing costs), allowed for more learning-by-doing, and made it possible to spread the fixed cost of design and manufacturing over larger output volumes (Amsden & Chu, 2003, p. 7). From a conceptual perspective a developmental state did not have to transition from domestic to export-led growth, however, an export push on the part of national firms allowed for higher volumes, particularly for relatively small economies such as Korea and Taiwan, and allowed the government bureaucracy to evaluate the success of sectoral interventions according to export performance (Woo-Cumings, 1999, p. 12; World Bank, 1993, pp. 22–23).

It is not our objective to outline in detail the manner in which China does and does not follow in the tradition of a developmental state; suffice it to say that there are elements of both. The critical difference from our perspective, however, is that China combines a very large domestic market with a high level of FDI that is focused on this domestic market. There have been large domestic markets in the past (Japan) and there have been states that have relied on FDI (Singapore, and to a lesser extent Taiwan), but the combination of the two has been rare. Foreign firms investing in China face a variety of restrictions, and in some sectors they are more severe than others, but the high level of FDI means that even when a certain industry benefits from a relatively low level of import competition, the domestic firms in the industry must face significant competition from foreign firms that are operating in China. Indeed, some scholars have argued that the system is systematically biased in favor of foreign firms (Huang, 2003).[4] Although many foreign firms in China are engaged in export processing, a majority of FDI is focused on the domestic market. In addition to the competition fostered by FDI, China is far more open than its neighbors were at comparable levels of development. This is particularly true after WTO accession, but according to Branstetter and Lardy (2008, p. 635), even prior to WTO accession, the height of formal tariff barriers was sometimes deceptive.[5]

The high levels of FDI in China point to a larger trend: the globalization of production. Although there is nothing new about international production, the degree of fragmentation between firms within a value chain and across national borders has increased as a result of the liberalization of trading regimes, reductions in transport and communication costs, and the ability to codify design information in digital form. One indication of this trend is the growth of trade in intermediate