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The China Syndrome: Local Labor Market Effects of Import Competition in the United States†

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We analyze the effect of rising Chinese import competition between 1990 and 2007 on US local labor markets, exploiting cross-market variation in import exposure stemming from initial differences in industry specialization and instrumenting for US imports using changes in Chinese imports by other high-income countries. Rising imports cause higher unemployment, lower labor force participation, and reduced wages in local labor markets that house import-competing manufacturing industries. In our main specification, import competition explains one-quarter of the contemporaneous aggregate decline in US manufacturing employment. Transfer benefits payments for unemployment, disability, retirement, and healthcare also rise sharply in more trade-exposed labor markets. (*JEL* E24, F14, F16, J23, J31, L60, O47, R12, R23)

The past two decades have seen a fruitful debate on the impact of international trade on US labor markets (Feenstra 2010). Beginning in the 1990s, the literature developed rapidly as economists sought to understand the forces behind rising US wage inequality. While in the 1980s, trade in the form of foreign outsourcing was associated with modest increases in the wage premium for skilled manufacturing labor (Feenstra and Hanson 1999), the evidence suggests that other shocks, including skill biased technical change, played a more important role in the evolution of the US wage structure in that decade (Katz and Autor 1999).[1]

One factor limiting trade's impact on US labor is that historically, imports from low-wage countries have been small (Krugman 2000). Though freer trade with countries at any income level may affect wages and employment, trade theory identifies low-wage countries as a likely source of disruption to high-wage labor markets (Krugman 2008). In 1991, low-income countries accounted for just

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[1] The significance of technical change for the US wage structure is a source of continuing debate. See Lemieux (2006); Autor, Katz, and Kearney (2008); Beaudry, Doms, and Lewis (2010); Autor and Acemoglu (2011); Firpo, Fortin, and Lemieux (2011); and Autor and Dorn (2013) for recent work.

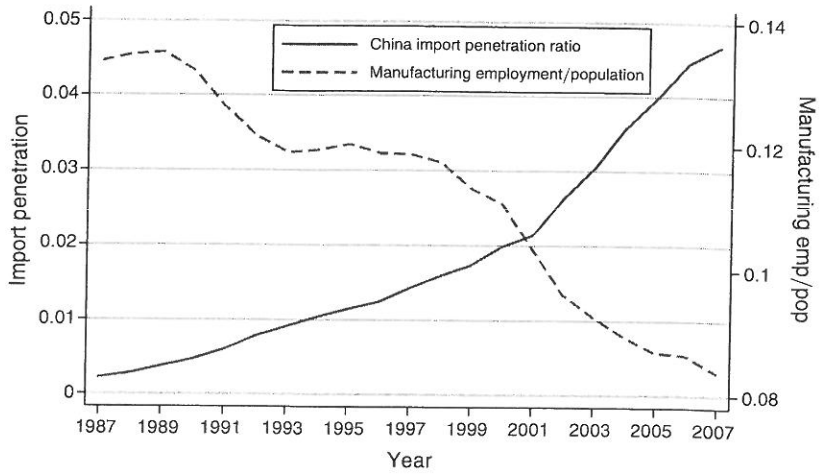

FIGURE 1. IMPORT PENETRATION RATIO FOR US IMPORTS FROM CHINA (*left scale*), AND SHARE OF US WORKING-AGE POPULATION EMPLOYED IN MANUFACTURING (*right scale*)

9 percent of US manufacturing imports.[2] However, owing largely to China's spectacular economic growth, the situation has changed markedly. In 2000, the low-income-country share of US imports reached 15 percent and climbed to 28 percent by 2007, with China accounting for 89 percent of this growth. The share of total US spending on Chinese goods rose from 0.6 percent in 1991 to 4.6 percent in 2007 (Figure 1), with an inflection point in 2001 when China joined the World Trade Organization (WTO).[3] Over the same period, the fraction of US working-age population employed in manufacturing fell by a third, from 12.6 percent to 8.4 percent (Figure 1).[4] Amplifying China's potential impact on the US labor market are sizable current-account imbalances in the two countries. In the 2000s, China's average current-account surplus was 5 percent of GDP, a figure equal to the contemporaneous average US current-account *deficit*. US industries have thus faced a major increase in import competition from China without an offsetting increase in demand for US exports.

In this paper, we relate changes in labor-market outcomes from 1990 to 2007 across US local labor markets to changes in exposure to Chinese import competition.

VIII. Conclusion

The value of annual US goods imports from China increased by a staggering 1,156 percent from 1991 to 2007, whereas US exports to China grew by much less. The rapid increase in US exposure to trade with China and other developing economies over this period suggests that the labor-market consequences of trade may have grown considerably relative to earlier decades. Much previous research has studied the effects of imports on manufacturing firms or employees of manufacturing industries. By analyzing local labor markets that are subject to differential trade shocks according to initial patterns of industry specialization, our paper extends the analysis of the consequences of trade beyond wage and employment changes in manufacturing. Specifically, we relate changes in manufacturing and nonmanufacturing employment, earnings, and transfer payments across US local labor markets to changes in market exposure to Chinese import competition. While most observed trade flows into the United States are the result of both

supply and demand factors, the growth of Chinese exports is largely the result of reform-induced changes within China: rising productivity, greater investment in labor-intensive export sectors, and a lowering of trade barriers. In light of these factors, we instrument for the growth in US imports from China using Chinese import growth in other high-income markets.

Our analysis finds that exposure to Chinese import competition affects local labor markets not just through manufacturing employment, which unsurprisingly is adversely affected, but also along numerous other margins. Import shocks trigger a decline in wages that is primarily observed outside of the manufacturing sector. Reductions in both employment and wage levels lead to a steep drop in the average earnings of households. These changes contribute to rising transfer payments through multiple federal and state programs, revealing an important margin of adjustment to trade that the literature has largely overlooked. Comparing two CZs at the 75th and 25th percentiles of rising Chinese trade exposure over the period of 2000 through 2007, we find a differential increase in transfer payments of about $63 per capita in the more exposed CZ. The largest transfer increases are for federal disability, retirement, and in-kind medical payments. Unemployment insurance and income assistance play a significant but secondary role. By contrast, Trade Adjustment Assistance (TAA), which specifically provides benefits to workers who have been displaced by trade shocks, accounts for a negligible part of the trade-induced increase in transfers.

Theory suggests that trade with China yields aggregate gains for the US economy. Our study also highlights the distributional consequences of trade and the medium-run efficiency losses associated with adjustment to trade shocks. The consequences of China trade for US employment, household income, and government benefit programs may contribute to public ambivalence toward globalization and specific anxiety about increasing trade with China.

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ABSTRACT

We suggest that the impact of globalization on wages has been missed because its effects must be captured by analyzing occupational exposure to globalization. In this paper, we extend our previous work to include recent years (2003-2008), a period of increasing import penetration, China's entry into the WTO, and growing US multinational employment abroad. We find significant effects of globalization, with offshoring to low wage countries and imports both associated with wage declines for US workers. We present evidence that globalization has led to the reallocation of workers away from high wage manufacturing jobs into other sectors and other occupations, with large declines in wages among workers who switch, explaining the large differences between industry and occupational analyses. While other research has focused primarily on China's trade, we find that offshoring to China has also contributed to wage declines among US workers. However, the role of trade is quantitatively much more important. We also explore the impact of trade and offshoring on labor force participation rates. While offshoring to China has a negative impact on US labor force participation, other factors such as increasing computer use and substitution of capital for labor are significantly more important determinants of US employment rates across occupations.

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