

GENERAL DISCUSSION
Policy Perspectives from the Bottom Up:
What Do Firm-Level Data Tell Us China Needs to Do?

Chair: Mark Spiegel

Mr. Spiegel: Let's take questions from the floor.

Mr. Hahm: I think it's a good sign that new firms with relatively high productivity are growing in China. But it seems unlikely that world aggregate demand will recover enough to resolve China's problem of overcapacity in many sectors, especially in manufacturing, where China invested heavily after the global financial crisis. Given the limited financial resources available to support the transition toward a more consumption- and service-oriented economy, I think that corporate restructuring of China's large manufacturing sector is very critical. So, do you see any progress in corporate restructuring, and is there any improvement in credit allocation towards more productive firms?

Mr. Wei: I have two questions for Loren. The first is about the measurement of total factor productivity (TFP) growth. Is it a revenue-based measure or a quantity-based measure? I suspect it's a revenue-based measure. One of the issues is that if firms' monopoly position strengthens, it might show up as TFP growth rather than as a change in markups. My second question is about the finding that TFP growth tends to be faster in sectors with fewer state-owned enterprises (SOEs). Sounds right, and I'd like to believe it is right, but I was wondering, with input/output linkages, how much does the success in a particular sector depend on other sectors? So the question is whether you can exclude the possibility that the success of the non-SOE sectors depends, in part, on the fact that the SOE-dominated sectors provide the necessary inputs. That is, they help the non-SOE sectors to be successful, to have high TFP growth.

Mr. Spiegel: Do you want to take those questions now?

Mr. Brandt: On the TFP estimates, the most recent TFP estimates are very similar to the De Loecker–Warzynski type estimates that are in their *American Economic Review (AER)* 2012 paper. These are revenue based and use

sector-level deflators, and under some identification restrictions we can sort out what's going on with the markup as well as TFP. A recent paper with co-authors has analyzed the impact of China's tariff liberalization on both TFP and markups.

SOEs are more likely to be involved in infrastructure and upstream-type sectors. These linkages can be extremely important, and the key question is: Can other firms provide these services and inputs more productively? My gut take on this is that they can. SOE domination appears to have increased in upstream sectors. The private firms entering these sectors also tend to serve the lower end of the market. Why aren't these firms moving into the middle, more demanding segments of the market? Well, one reason is it takes enormous amounts of investment in R&D, capital, and human resources. When these firms look at opportunities to expand, they're worried that these huge investments may not pay off, because they see a market highly skewed in favor of SOEs. This is an issue in segments of the power sector. In the case of wind power, for example, power-generating companies often own the wind turbine companies and also own the wind farms. It is an increasingly highly vertically integrated industry.

Currently, I'm actually rather pessimistic, because what I see in industry after industry, especially with respect to the SOEs, is a very top-down industrial management strategy. There are two recent cases, one of which was announced yesterday, where they've decided to merge the two largest ship-building companies. It's the same thing that they did with the two largest manufacturers of railroad equipment. Any time that there is a top-down strategy to encourage this kind of consolidation in the industry, predictable behavior by firms at the bottom follows. If I happen to be a local or provincial SOE or I'm a provincial party secretary, I'm going to try to consolidate firms that are under my control and expand in order to avoid being acquired. We don't have good enough data to formally estimate the impact of corporate restructuring and consolidation on productivity, but I'm hoping that in some new work that we're doing we'll be able to look at how SOEs and their structures are changing over time—for example, through mergers and acquisitions activity—and see if it's having any impact on how these firms are performing. My view of the restructuring now occurring at the sector level—the increasing vertical integration by many of these SOEs—is that it's not a recipe for dynamism but rather a recipe for continued low productivity growth.

Mr. Spiegel: Okay, I have two questions here.

Mr. Liew: The Chinese government has talked about a new normal growth rate of 6 to 7 percent. My question is, with labor force growing at about zero, with productivity growth low, and with trade growth slowing down, how can this growth target be achieved? And if it cannot be achieved, what kind of reforms can generate higher productivity growth? I'm wondering whether China might be in for a period of much slower GDP growth than is expected.

Mr. Warjiyo: Chinese firms are doing more foreign direct investment in Southeast Asia. My question is, are they able to compete with Japan and South Korea competitors and what is the implication for the regional pattern of production?

Mr. Brandt: Let me work backwards. I think that there are many sectors where Chinese firms are competitive, although they're still not able to compete at the highest end of the market. They are not going to be competing with the Japanese, they may not even be competing with the Koreans, but if you take a look at firms in power generation, heavy construction, and machine tools, what you find is that there are very good Chinese firms that are competitive in what I would call middle market segments. I think that in these markets Chinese firms have positioned themselves extremely well, and so when you talk to multinationals, their concern is about the ability that these Chinese firms have developed to be able to compete in emerging markets. In some sense the success that Chinese firms have had in their own market when competing with multinationals has put them in a relatively good position to be able to be competitive in emerging markets.

But the other thing you also see that worries me is how China is trying to deal with problems of excess capacity. Excess capacity is a problem that has been recurring for 30 years, which tells us something about both the nature of the incentives and the access to finance in these sectors. You often have a combination of state-connected firms expanding but also very dynamic private firms that are entering those sectors because of increasing market demand. So, it's a problem of excess capacity, but at the same time some of the most dynamic firms in those sectors aren't growing as rapidly as they could. They see market opportunities and want to expand rapidly. But they are not the problem. The problem is those larger state-connected firms that have access to finance and that are expanding relatively rapidly.

In response to the question that was raised about China's projected growth rate, it's difficult to gauge what growth rate China will be able to achieve. If you compare productivity levels in China with the United States and Europe,

productivity is only about 40 percent. What that means is that there is still an enormous amount of room to improve productivity through a variety of means. It's also clear that one thing contributing to the lower productivity in China is the enormous dispersion in productivity levels across firms. So, I think there is still much room for productivity growth across firms and across sectors.

If you're familiar with the work of Chang-Tai Hsieh and Peter Klenow, you know that there's an enormous inefficiency in allocation of resources within sectors. Chang-Tai and Pete's work suggests that if you eliminate the inefficiencies within sectors in China to the levels in the United States, you can improve productivity by 40 percent. So, within sectors, as well as across sectors, I think there's still an enormous amount of room for productivity growth. In addition, if you look at the capital-output ratio in China, it's still only 30 to 40 percent of that in the United States. Although the returns to investment are going to depend a lot on productivity growth, there is still much room for growth through capital deepening. There's a side to me that says 6 percent growth in China is certainly reasonable if growing domestic demand is accompanied by the kinds of reforms that we've been talking about at both the macro and micro level to provide the right kinds of incentives for investment on the supply side. As David talked about, demand and supply need to be in balance for China to maintain a high rate of growth.

Mr. Hoshi: This is a very interesting paper, and I have one question and one suggestion. The question is whether you find that sectors dominated by SOEs tend to have low productivity growth and negative entry effects, and I'm wondering which way the causality goes. One possibility is that some sectors are dominated by SOEs for some reason, like entry barriers or maybe distorted credit policy that Tao mentioned, and that those sectors do not have a high productivity growth, so a negative productivity growth. But the other possibility is that some sectors have low productivity growth for some technological reason, and private sectors do not find it attractive to enter those sectors that the SOEs continue to dominate. I'd like to have your view on that. My suggestion is to decompose the extent of entry into each sector further into entries by SOEs and non-SOEs separately. I think that this type of exercise would be informative.

Mr. Brandt: We have, in fact, done that. I don't present the results in the paper at this conference, but we did decompose on every margin between SOEs and firms, and what you see in these SOE-dominated sectors is that not only are the SOEs bad, but so are the private firms. And that tells us something about the nature of the entry process into those sectors, because these are often sectors, if you look at their profitability figures, where there are rents or profits to be

made. Firms want to enter these sectors, but the regulatory process through which firms are allowed permission to enter these sectors is highly politicized. David talked about autos. I think the auto sector is a good case of how regulations affect activity. Since you need a license if you want to expand capacity, you either have to buy capacity from some firm that's long since bankrupt or you need to get the National Development and Reform Commission to give you permission to expand your capacity. So, what I would say is that in many of these sectors everything is highly politicized, and though private firms may be entering, they're not necessarily good private firms.

One sector that I've spent a lot of time looking at is heavy construction equipment. This, in part, reflects my Peoria, Illinois roots. Peoria is home to Caterpillar. This is an industry where Chinese firms have done remarkably well. It's a sector where, back in 1990–92, tariffs on heavy construction equipment were 17 percent. By comparison, tariffs on autos were somewhere on the order of 80 percent. It's a sector where all kinds of technology transfers were allowed through licensing, joint ventures, and fully owned subsidiaries. It's a sector where very early on private firms were allowed to enter. It's a sector where much of the demand came from private Chinese construction companies. Twenty or thirty years ago the market was highly segmented, with Chinese firms operating mainly at the low end, making wheel loaders. Today, Chinese firms have moved more up market, making about half of the excavators. They're competing with Komatsu, with Caterpillar, with Volvo, with Hyundai, and they're doing extremely well. Contrast that with what we see in the auto sector. Chinese domestic automobile companies have had enormous difficulty over the last twelve years, particularly in the last three or four years when their market share has declined enormously. A lot of them can't compete in the domestic market and are now trying to export. I think you raise a good question about the direction of the causality, but I think it's also a matter of time. If you take a look at the success of firms in Japan and Korea, we're talking 15–20 years of investment by firms in those sectors to be able to compete in various market segments. There's no reason for us to expect anything less in the case of China.

Mr. Choi: I have a question about the relationship between exchange rate appreciation and how this affects China's service sector. As we have heard from Professor Prasad's presentation, the yuan has appreciated more than 35 percent against the dollar since 2005. This is quite substantive. With the service sector in terms of GDP over 50 percent, it is very important to consider the effects of changes in the terms of trade and the relative price between tradables

and non-tradables, such as services. While appreciation hurts the competitiveness of the manufacturing sector, my question is, what is the implication for employment and wages?

Mr. Brandt: That question is way out of my element. I have two guys who are sitting on my left who might be in a much better position to answer.

Mr. Spiegel: Yes, I was going to ask if the discussants had any closing remarks.

Mr. Dollar: In addition to the big real exchange rate appreciation of the yuan that Eswar (Prasad) showed, right now service-sector prices in China are rising at a healthy rate, maybe 3 percent per year, while industry prices are deflating at 6 percent per year. So, you're getting a very, very serious internal terms-of-trade change. In terms of employment, they report that employment generation is very good, with roughly 7 million urban jobs generated in the first half of the year. While the level of the labor force may have peaked, there's still quite a bit of potential for rural migration, which would be the main source of urban employment growth. Since the service sector is much more labor intensive, it looks like China has a virtual circle where the labor market tightens, wages go up, consumption rises, and people mostly spend their money on services, and those service sectors are more labor intensive. So the question is, can they keep this dynamic going while the bleeding of the industrial sector continues?

Mr. Spiegel: I think we have a break now, and we're going to start again with our policy panel at 3:45 sharp, so please join me in thanking Loren and the discussants of his paper.