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International Trade

Usha Haley, co-author, along with her husband George Haley, of "Subsidies to Chinese Industry: State Capitalism, Business Strategy and Trade Policy" spoke by telephone May 23 with BNA China correspondent Michael Standaert. The book, recently published, by Oxford University Press, examines China's subsidy policies in five capital intensive industries—steel, paper, auto parts, solar panels, and glass. Usha Haley is an incoming professor and director, Robbins Center for Global Business & Strategy at the College of Business & Economics, West Virginia University, Morgantown.

China's Capital Intensive Industries Examined in Study on Subsidies



BNA: *What is your assessment of how Chinese subsidy policies have distorted the world trade market, in particular over the last decade since China joined the WTO? How has China been able to get away with these policies without more pressure from the international trade community and particularly within the framework of the World Trade Organization process?*

Usha Haley: We studied capital intensive industries—steel, glass, paper, auto parts and solar—it is within these industries that China moved, within five years after joining the WTO from being a net importer, and often a bit player, to often the largest, if not the largest manufacturer and exporter in the world. In these industries, labor costs were irrelevant. Labor comprised between 2 and 7 percent of total costs for these industries and those are global costs, so labor does not explain China's cost advantage.

When we examined them, there was no other source of competitive advantage other than cheap capital for these industries. These industries were highly fragmented so for example in steel, the top 14 companies controlled less than 40 percent [of the market] and the rest were very small companies. The industries were also very geographically fragmented. Every province wanted one of these industries. They were mostly populated by small smokestack manufacturers that had no economies of scale or scope, they had no resource or technological advantage that could be used to explain the low prices.

For example with the paper industry, China has among the smallest forest bases per capita in the world. It imports most of its raw materials, including pulp, at world market prices. Most of the companies in the industry are small and use old, smoke-belching technology. But in these industries the Chinese prices are between 25 to 30 percent lower than U.S. or EU [European Union] prices. Knowing that, we started out looking at the subsidies. We've argued that the subsidies have propelled China to develop comparative advantage in areas in which it did not have them. There have been enormous ramifications. First is the excess capacity that the subsidies have brought about. For example, two-thirds of all stimulus money in China goes directly to the provinces and then they use that for the building of production capacity.

BNA: *How has this affected Chinese steel development?*

UH: Well, China had the largest steel industry in the world when it entered the WTO. It controlled 16 percent of world production in 1999, right before it joined the WTO. **In ten** years, it moved to account for 50 percent of world steel production. So it would have still had the largest industry, but not to this extent. As the largest steel producer in the world, China has had a significant impact on global steel prices and supplies of raw materials.

Currently, there is a glut in the steel industry and a lot of excess capacity, but the Chinese have added excess capacity annually every year to the steel industry, despite that. For example, recently the Chinese government has released figures showing that China's steel industry has grown by another 9 percent in 2013. The debt-to-asset ratio continues to rise and downstream product prices have been suppressed. In the solar industry, China went from being a bit player to manufacturing 80 percent of world solar panels in five years. Prices fell over 70 percent in that time, and numerous U.S. and EU manufacturers have shuttered their facilities.

But China, the largest solar panel manufacturer and exporter by far, has less than 1 percent of worldwide solar installation. Despite really good policies— implementation has always been a problem in China—they've done little to expand the domestic market for solar panels. The policies have not been implemented. Currently over 100 percent excess capacity exists in solar panels and the great bulk of it is in China and the Chinese are still adding capacity.

BNA: *They are still adding capacity even though many of these top solar companies in China are having problems recently?*

UH: That's right. They are still adding. Over the last five years, we saw industrialized countries become exporters of commodities and scrap to fuel Chinese production, further skewing the comparative advantage. And it has certainly affected the quality of Chinese exports. In 2000, labor-intensive products were 37 percent of all Chinese exports and by 2010 this fell to 14 percent. In parallel, from 2004 to 2011, U.S. imports of technologically advanced products from China grew by 16 percent annually, while U.S. exports of similar products to China grew by only 11 percent.

If you look at the breakdown, in 2011 the U.S. imported 560 percent more technologically advanced products from China than it had exported; this does not really gel with comparative advantage. In the same time, the annual U.S. trade surplus with China in scrap and waste grew from \$715 million in 2000 to \$8.4 billion in 2010. You see the shift from technologically advanced products that [the U.S.] was exporting, to commodities. The last decade, people call it the Chinese century, but whatever you call it, it has been one of sweeping change. The Chinese have this curse, right, "May you live in interesting times." We're certainly living in them.

Since 2000, when China joined the WTO, the value of Chinese exports have more than quadrupled. In 2009 China surpassed Germany to become the largest exporter in the world, and in 2010 it overtook Japan to become the second-largest manufacturer, and its foreign exchange reserves became the largest in the world. In the last year, China overtook the U.S. to become the biggest trading nation in the world, giving it enormous clout. People are saying—"What happens when China becomes a world power"—well, we should wake up and smell the coffee, China is a world power.

BNA: *Have you thought about, or done any analysis on what the global trading system would have looked like if these subsidy policies had not gone on to such a massive extent that they have?*

UH: Those are questions you can never answer. You can never step into the same river twice. Things have changed. It has happened, it has propelled itself, and it has become self-perpetuating. I don't think China's central government wants to keep adding excess capacity, I just don't think it can control it anymore. People forget that it is a weak center, with strong provinces.

BNA: *It is difficult to stop the momentum of these policies. I know around the time of the National People's Congress meetings in March there was talk about trying to cut off loans and capital for the*

solar industry in order to help restructure the industry and solve the excess capacity problem, but not much seems to have been done.

UH: They do that periodically. Every year they talk about the steel industry, every year they talk about cutting excess capacity, and it seems there are parallel narratives going on in the provinces and it doesn't happen.

BNA: *How complicit do you think the U.S. and EU are in allowing these subsidy policies to grow to the extent they have? Before the financial crisis in 2008, you didn't hear too much about this issue since these policies allowed China to create and import cheap products to those markets where consumers could pay low prices. Do you think that helped encourage this to go to the extreme it has?*

UH: There are several interests at play. The U.S. is not a homogenous country, there are many interests. In the U.S. you hear them, in China you don't. Economists certainly have always advocated against subsidies, though they have also said that if a country subsidizes, consumers gain while the country loses. It is a much more complex issue here. The scale and the speed of Chinese subsidies have altered global industries. Capital-intensive, technologically advanced manufacturing industries, where the U.S. and EU have had a comparative advantage, have shriveled. In the longer term, consumers and technological development will suffer.

We found that in the solar industry. The Chinese are generally going with an older, established technology that they could standardize. The scale of Chinese manufacturing will affect and has impacted further technological development and the rise of cost saving or superior technologies in these industries. These industries have very high fixed costs. You need to ramp up the scale in order to get some benefit, and you can't do that if China controls 80 percent of the market. So what has happened is that China's chosen technology also becomes the world standard. Then it becomes very difficult to get those new, fringe technologies that alter an entire industry and it has happened so often.

BNA: *So it is increasingly difficult to get new, innovative products out there because they are not being created here in China?*

UH: Yeah. That's right. Our research also shows that most of these Chinese companies, the latest one being LDK Solar, would be bankrupt without subsidies. When Chinese manufacturers have destroyed their international competitors, I would assume, rationally, that they would raise prices for consumers worldwide, because that is what monopolies do. Why would they want to keep on losing money? I think the U.S. and EU inaction on this issue has arisen because they don't understand China. They don't understand China because the data are so poor on China.

For various institutional and strategic regions, very poor data exist to measure industrial productivity and subsidies to these industries. When we wrote our previous book we spoke to managers in China all of whom said they don't use Chinese data. Think about that, Chinese decisionmakers do not rely on Chinese data. It's an open secret that statistics put out by the government are not really worth the paper they are printed on.

But the U.S. International Trade Commission relies on Chinese data. I was shocked to find that out. Many of our government agencies, many of our companies continue to rely on Chinese data. And the Chinese have, of course, not really been forthcoming on the amounts of subsidies.

The WTO has an annual disclosure requirement and China has fulfilled it only once since joining the WTO. That disclosure only talked about subsidies to foreign invested enterprises and didn't talk about subsidies to domestic companies or state-owned enterprises (SOEs) or those given by the provinces. The U.S. has repeatedly asked China to disclose its subsidies and [China] has ignored those requests

BNA: *There are a variety of forms of subsidies in China—tax breaks on land, energy prices are subsidies, components, raw materials, technologies all get subsidies, there are loans from state-owned banks at preferential rates—is it more of a matter of scale that these are problematic, or is it so different from how other countries support their industries? Aren't other countries doing the same thing, particularly with helping industries like renewable energy?*

UH: There are subsidies in almost every country in the world. But several things differentiate the Chinese subsidies. The scale, the focus, and their opacity, and the fact that subsidies in China are primarily to produce products for export. The last thing, the subsidies for products for export, is deemed actionable by the WTO. On renewable energy, for solar especially, no free market exists. Solar energy is much more expensive than coal, so all countries either subsidize production or subsidize consumption.

There has been technological development in solar that has helped push down the price. Some calculations indicate that without China's intervention prices would have fallen by about 30 percent within [the past five years] just on technological innovations alone. But of course within five years they fell 75 percent, rendering a lot of companies bankrupt. The prices would have fallen more gradually allowing for adjustment, based on the technological developments that have pushed solar toward grid parity with coal. But despite the fall in prices, solar remains the most expensive energy source, which is why countries either support consumption or production.

The U.S. and Germany have led with consumption subsidies, especially Germany which has a really fine-tuned feed in tariff scheme, and the scale and market to ramp up production. The U.S. has been spotty in some respects with some states supporting it and others not, so the U.S. market as a whole for solar has not been developed, though some states are leaders, take California for example, in supporting solar consumption.

The U.S. in particular has been a leader in subsidies for technology development. The U.S. offers more than all the countries combined, and this is something China does not do. China has been a leader in offering production subsidies, including for technology acquisition rather than development. So once a company develops the technology in the U.S., China approaches it to move production to China. China has technology acquisition but the domestic market remains underdeveloped. China aims at exporting these products primarily to the U.S. and EU markets.

In solar, China subsidizes production, almost every other country subsidizes consumption. The U.S. is the leader in technological advances for solar, and of course the U.S. invented solar technology. When researching for this book we went to Evergreen Solar before they moved to China and we asked them why they were moving to China. The managers were very open about this, they said China has no labor cost advantage, the 2 or 3 percent labor cost savings they would get would be wiped out because of other hidden costs of operating in China, but it is the readily available capital that motivated their decision.

There was no comparison on capital costs between the US and China. In China, Evergreen did not have to repay the loan for the life of the loan. Money they borrowed from Massachusetts, covered only 30 percent of their costs, but that 30 percent was the largest loan that Massachusetts had ever made. Despite that, Evergreen had to raise the rest of the money on the open market at double-digit interest. So they decided to move. I asked them, what about your proprietary technology that you've developed? They said, oh, [China] doesn't really want that. Of course they wanted it. The technology is gone. They said the Chinese, when they negotiated, were really open about this, they said "We want employment, you can manufacture here" ... They negotiated for their people. The U.S. has not been so active about it.

BNA: *This major Chinese company Suntech that recently declared bankruptcy—if you read the reports after that, the local government said it would step in and basically make sure it keeps running because of the fear of unemployment.*

UH: That's true. They've been single-minded about it. They have their interests and they've been pursuing them. They have acted rationally, the U.S. and EU have not acted rationally in my opinion.

BNA: *There is a lot of inefficiency in all of these subsidies, but do you think that is a side effect or something that is intentional? It seems like the pumping of subsidies into these industries to expand them and take market share, leads to great inefficiency but does allow them to grab that market.*

UH: I don't think China is pursuing inefficiency, I think we see it as a side effect. China is an emerging market and political considerations trump economic ones. China's state-capitalist regime has used state subsidies as a tool to promote the government and the Communist Party's interests. The state has willingly paid the price of sacrificing economic efficiency in order to establish social, economic and

diplomatic goals of the Communist Party. One of those goals is dominating strategically important industries worldwide—that is an open goal that they have stated. So this would have been unimportant, but in the last five years or so there have been these shifts in industries moving from industrialized to non-industrialized countries that gives this issue real immediacy. It has roughly transcended what the Chinese government wants to an actual, practical thing and that should be important when you negotiate with the Chinese, because they have political considerations, not economic ones, that are the predominant ones. Subsidies are probably the game-changer of our generation. It is because they are so poorly understood and the effects that are taking place are sweeping effects. It has changed industries. Industries have been hollowed out, employment has been lost.

BNA: *What strategies do you think are needed to deal with the subsidy regime that China has created, since it doesn't seem like the anti-subsidy and countervailing duty measures work effectively since they take so long to play out?*

UH: The measures we have are really slow, process-oriented measures and the scale of the change is so huge. While these measures are going through [in the recent solar case], two dozen U.S. solar manufacturers had already scaled back production or gone bankrupt. The U.S. is currently collecting tariffs of about 30 percent on [Chinese] solar panels and the EU is expected to impose similar tariffs of 50 percent on [June 5], though they may backdate them to March 5. The tariffs have been really inefficient. They've been unable to control the rising subsidization of Chinese industry. While the Chinese industry continues to grow, continues to add excess capacity, solar panel prices continue to fall. The Chinese producers have found loopholes in the U.S. tariffs and now conduct one solar panel manufacturing stage outside of mainland China in Taiwan—that of turning solar wafers into solar cells. They've circumvented the U.S. tariffs. We built a mousetrap and got a smarter mouse. It's just not the effective way to do it.

BNA: *So what kinds of new strategies are needed?*

UH: The U.S. and EU and major markets for solar panels and these other subsidized goods should really draw a line in the sand and say, no more. Just like the U.S. is not going to get into squabbles with the Chinese government, the Chinese central government does not want to get into squabbles with its provinces if it can avoid them, since they have other issues that are pressing, rising social unrest, etc. A very hard line in the sand, saying no more, saying we don't care what you do domestically but you get things under control with exports, that's the only way this works. The Chinese can control matters when they want to. One of the problems we are having is that we keep closing the barn door after the horse has bolted. We spend all this time marshalling resources, building counterarguments, while the Chinese industries continue to expand and erode the manufacturing bases that we are trying to protect.

BNA: *Well here is one where the barn door might be half open. China is trying to develop and support seven key strategic industries, a policy that has just started with this 12th Five-Year Plan (2011-2015). Do you see this as the next big segment for subsidies in China and what strategies can be employed to deal with the rise of subsidies in these sectors, these high-end manufacturing, modern industry, higher added-value industry?*

UH: We didn't actually study them, but a lot of the subsidies that came up, particularly to energy, would obviously apply to these industries, given the policy of subsidies in China, to get a leg up, to dominate an industry, to allow for an easy tool to provide employment and stave off social unrest. I think the U.S. and EU moves on telecommunications equipment with Huawei and ZTE, with these industries being walled off so that if there are connected transfers of technology that China wants, that they will also be walled off based on national security measures, are appropriate measures and that is happening. I don't know whether the Chinese can develop those industries independently. Many of these industries were subsidized in the incipient stages in the U.S. as well. I don't see it as such problem, if they could open up their markets and allow companies in. But China does not allow companies into

strategically important industries, it is very restrictive and companies are forced to transfer their technology, which erodes the company's competitive advantage. There is an issue of greed here as well, and the idea that the U.S. and EU companies can get a competitive advantage because they are so smart. They are not that smart. So I think it is about going in with eyes open and drawing lines in the sand and understanding what the Chinese are in it for -- not necessarily about efficiencies, indeed, not about efficiencies at all. The Chinese are playing a different game and we should understand that people playing by different rules to win.

BNA: *How difficult was it to access the data on these subsidy policies in China?*

UH: This is the million-dollar question. Our subsidy information [contains] conservative estimates. The subsidies that we identified are the tip of the iceberg. Obtaining information on subsidies, the nature and the type, is extremely complicated in China because corporate reporting in China is limited and often unavailable. Try getting an SOE corporate report, for example. The Chinese subsidy programs often result from unpublicized, internally circulated measures. We found a couple of them for example on energy, which provinces were subsidizing their industries, because some circulars had been issued. Another was on how coal prices would be subsidized when electricity consumption and therefore coal consumption and prices went up, and we only found a couple of these circulars, but there literally must be hundreds of them. We have just touched the tip of the iceberg. There are several reasons, institutional reasons, strategic reasons, but it is not always nefarious, the inability to get data. Energy subsidies are particularly difficult to look at because there is a lack of rigorous and regular surveys and because Chinese official statistics are full of inconsistencies. For example, the numbers reported on growth in [gross domestic product] and fixed-asset investment, as well as between investment and savings, are incompatible. The accounting data in China is really opaque, especially related to what they call "inter-party transactions" and that is because the state dominates so much of the economy that it is very difficult to decipher who is selling to whom and who is buying from whom and at what prices. Pure state-controlled enterprises have no corporate disclosure requirements. For the research for the book, many of the company's annual reports did not reveal standard accounting data such as bad debt, and did not define terms such as payables to the government. Now, when you ask for some of these definitions, it is against the law. They won't provide the data and they won't provide how they defined it. Second, the other thing to bring up here, this is with larger companies, but smaller companies don't seem to keep any accounting statements whatsoever. Most of these companies are small, which was another limit on our data. There is also a problem with cash inflows, where some companies operations exceeded the sales reported on income statements and there [were] no clarifications. There are no consistent disclosure requirements. Many of the companies file their detailed annual financial statements only sporadically. And for all the industries, subsidies to and from the large SOEs or even the collectives are difficult to identify because of their accounting practices. What we found very disturbing is that some of the companies appeared to be reporting government subsidies as profits or revenues. What we did to circumvent this was to use data from multiple sources, not just from China. We looked at their government data, especially on industry production, because that was often quite convenient to get, but we also got data from the EU, Taiwan, India, Australia, we looked at Chinese government data from the National Reform and Development Commission (NDRC), we looked at U.S. government data from the ITC, we got international agency data from the International Energy Agency, and this is especially good for things like paper and pulp because they started to collect some of their own data when they found out that the data the Chinese were releasing just did not make sense. We also looked at many international investment houses and also industry associations. Then we approached companies to see what they reported for purchase prices, so we got company data as well. It took a year to analyze each industry. The reason was that the inconsistencies, the data often didn't match. So when there was too large a variable we just had to throw out the data, so our data is really, really conservative. In China there is a lot of anecdotal evidence, but there is no systematic evidence to show that, though there is anecdotal evidence of this, that some Chinese provinces unhook some of their companies from the electric grid [as far as charging], but there is no data to show that.

BNA: *They unhook them from the grid to*

UH: To reduce their electricity cost, to reduce it to zero. The same thing, free land, there is nothing to account for that sale, they just get free land. So this is by no means complete. That is why it took five years. We thought that when we first started with the steel industry, it would take five or six weeks. After that, we just factored it in.

BNA: *Do you think China can continue with these strategies without facing massive repercussions in its own economy? We often hear these stories of bad loans and local debt problems that have bubbled up, but since the data is hard to get you wonder if a lot of it is hidden or written off ...*

UH: I can only guess. My opinion is that China is not collapsing anytime soon. If China collapses there would be enormous problems for the rest of the world, so let's hope it doesn't. The Chinese provincial governments have used subsidies to stave off social unrest and to provide employment to the masses. They will keep doing this, it is an easy way to get money, it's like charging up the credit card, they can't stop. There has got to be a line in the sand drawn very clearly, the U.S. and EU government should stand up for their industries, it is always shunted around to the side because of geopolitical considerations.

It's not just China that is involved, the effects have transcended China, it is a global problem. Industrialized countries continue to see their manufacturing sectors decimated, their comparative advantages evaporate, and they will continue to become importers of higher value added products from China. But it's not just the industrialized countries, but places like China and Brazil, where subsidy policies are becoming hotly debated because they have seen their manufacturing subverted and they have become relegated to becoming suppliers of commodities to China.

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