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Hearing: China's Industrial Policy and its Impact on U.S. Companies, Workers and the American Economy

I thank the Commission, its Co-Chairs, Messrs. Patrick Mulloy and Daniel Slane, and the Commission's staff for the opportunity to present this testimony today.

The questions before the Commission today are important to the future economic wellbeing of the United States. In this statement, I will address what the Chinese pillar industries include, discuss the impact of policy, and analyze their competitive effects and ramifications for U.S. competitiveness

The Pillar Industries:
What pillar or strategic industries has China currently chosen to support? What criteria did China use to choose these Industries? Does the government of China offer special incentives to attract foreign investment to build such industries?

China chooses pillar or strategic industries on the following criteria:

- Defense
- Job creation
- Technology acquisition
- Competitive advantage

Several industries fall under more than one criterion. Table 1 lists the pillar industries under their different criteria, and in some instances, under more than one criterion. The following industries constitute pillar or strategic industries for China as promulgated in China's 10th and 11th five year plans:

- Aerospace
- Autos & auto parts
- Banking & insurance
- Bio-technology
- Computer chip design & manufacture
- Computing & computer hardware
- Information technology
- Iron & steel

- Logistics, shipping and storage
- Machinery and mechanical equipment
- Oil & petrochemicals
- Software
- Telecommunications & telecom equipment
- Utilities & power equipment
- Wholesaling & retailing
- Strategic brand equity

In addition to standard subsidies such as direct cash transfers to no-cost loans, etc., the central government has started offering subsidies in support of brand equity or support to specific brands of products. The central government does offer special incentives for foreign companies to enter China in some of the pillar industries, for instance autos & auto parts, telecom equipment, bio-technology, information technology and computer chip design & manufacture. In many instances, provincial and local municipal governments offer incentives. In some instances, such as with the steel industry and the logistics, shipping and storage industries, and more recently in the acquisition of leading brands, foreign companies experience barriers and regulatory obstacles to entry.

Policy Impact:
What impact has China's support of its pillar industries had on U.S. industries and the U.S. economy? How are state-owned banks used to support China's industrial policy? How do state-owned enterprises benefit from Chinese industrial policies?

The impact of Chinese governmental support has been varied and in some instances, quite dramatic. Table 2, which focuses on the steel industry, provides a lens for understanding these impacts. From 2003 to 2007, a period of economic growth in the U.S., especially in the construction industry, U.S. domestic steel production increased from 93.7 million metric tons to 97.2 million. When the recession hit in December 2007, 2008 U.S. production dropped to 91.5 million. The period from 2003 through 2007 also constituted a period of economic growth in China, and once again, especially in the construction industry. However growth in Chinese capacity and production of steel far outstripped growth in demand. Chinese steel production between 2003 and 2007 more than doubled from 222.3 million metric tons to 489 million, with double digit growth in each year. With the onslaught of the worldwide recession, growth moderated substantially downward to 2.6 percent, but Chinese steel production rose to 502 million metric tons, regardless of the fact that the Chinese construction industry's growth has slumped to 7.1 percent, little more than half its growth rate of 2006, and not nearly enough to offset the growth in steel making capacity.

Table 2 also presents the extraordinary growth in Chinese steel exports to the U.S. Chinese steel exports to the U.S. in 2008 were twenty times its exports to the U.S. in 2003. Differences in relative labor costs between the two countries cannot explain this growth in exports. Though Chinese labor costs per hour in the steel industry are roughly one twentieth that of U.S. labor,

labor represents only about ten percent of the total costs for steel[1]. Additionally, U.S. labor productivity in the steel industry is 12.1 times the labor productivity in the Chinese steel industry. Finally, Table 2 demonstrates that from 2003 to 2007, the U.S. steel industry lost 10,660 employees, or 9.9 percent of its workforce. Given the steel industry's job multiplier of 3.3, this represents a total loss to the economy of 35,178 jobs.

Chinese banks advance governmental policy in a number of ways. Presently, China's banks reinforce the government's effort to reignite the economy in two ways. First, Chinese banks have the government-mandated goal of providing a minimum of 5,000 billion Yuan (US$731.6 billion) in new loans. Second, the government looks to the banks for a significant amount of the funding for its 4 trillion Yuan (US$585 billion) stimulus package. The Beijing government will fund only one quarter of the stimulus package, and local governments and banks will fund the balance. Additionally, when it wants to stimulate a specific industry, such as autos, the government instructs the banks to offer extremely low-cost loans. In the late 1990's and early part of this decade, China stimulated the growth in the auto industry, and thus the growth of foreign direct investment from Western and Japanese auto companies, in this fashion. When the government later decided to raise interest rates, Western companies could not meet sales or profitability projections. Today, China has decided on a policy of stimulating sales of vehicles with small engines, less than 1.6 litres, and is offering low-interest loans, the elimination of a five-percent vehicle-buying tax, and for farmers buying trucks or cars with engines of 1.3 litres or less, additional subsidies of 5 billion Yuan ($730 million) payable in lump-sum amounts, have been allocated. These subsidies and tax rebates are over and above the subsidies and other support measures the government is giving its auto companies during the present economic crisis.

The Chinese government has often subsidized state-owned enterprises without having the subsidies tracked to operating companies' books. Common practices include transferring the state-owned enterprise's best assets to an operating company subsidiary which then lists on a Chinese stock exchange. When the government decides that a company requires a subsidy, it makes a direct cash transfer, or a low-cost bank loan to the unlisted parent company, which then transfers the funds to its listed subsidiary. In this way, the subsidy never appears on the listed company's books.

State-owned enterprises benefit in many other ways. The State Council has allocated 10 billion Yuan ($1.5 billion) in special funds to the auto industry over the next three years to support technology innovation, and the development of new-energy and electric vehicles and their parts. In addition, while not indicating the amount of funding, the State Council also announced that it would speed up the building of bases for the export of autos, support the building of brand equity and recognition of Chinese auto companies, and mandate a general enhancement of credit arrangements for the purchase of autos (January 14, 2009).

[1] Haley, U. C. V. (2008) *Shedding light on energy subsidies in China: An analysis of China's steel industry from 2000-2007*, Alliance for American Manufacturing.

Examples of other benefits include the stabilization of share prices by the State-owned Assets Supervision and Administration Commission (SASAC); industry consolidation plans developed, mandated and supervised by SASAC (logistics, storage and shipping industry); funding of capital asset projects (utilities and power industry); funding of technology development and quality enhancement projects (auto, aerospace, bio-technology, steel and telecommunications industries, among others); and funding, regulatory support and cultural pressure (by naming them "time honored brands") in support of brand building for specified Chinese products both overseas and domestically (autos - Chery, appliances - Haier, computers - Lenovo, liquor - Maotai, candy – White Rabbit Milk Candy, and a host of other products).

American companies will still be able to compete in many industries globally; however, their market shares, costs, profitability and employment levels will be affected. Questions will arise on the long-term viability of some second-tier companies. The U.S. is not a low-cost producer. To be competitive, U.S. companies must contend on the basis of quality and brand equity. Hence, the Chinese government's efforts to subsidize technology acquisition, quality control and brand equity constitute direct attacks on the U.S. companies' market positions and competitive advantages. This, in concert with the Chinese government's naming the wholesaling and retailing industries together with the logistics, storage and shipping industry as pillar industries, and moving to consolidate them into more efficient cross-nodal logistics and transportation giants, raises grave concerns. Competitive advantages of distribution and channel management often pose the most formidable challenges for companies to overcome. The Chinese government's industrial policies have focused on the backbone of the value chain and distribution channel. Efficiency in the value chain and distribution channels will give Chinese companies significant advantages in China's export markets that it does not presently have, and may deny U.S. companies equal access to Chinese markets. This same issue created a difficult competitive environment for many U.S. companies in Japan.

Competitive Effects:
How are China's industrial policies likely to affect global markets and American competitiveness? What developments can we expect to see over the next five years?

China's policies will probably contribute to severe disruption in global markets. Though the Chinese policies tend to reduce consumer prices, they do so in anti-competitive fashions. The use of government subsidies to control costs in Chinese industry, and to promote the acquisition of competitive advantages in brands and technology, creates situations where foreign companies cannot compete and are forced into closure.

The global steel industry reflects the effects of Chinese industrial policies. Due to the tremendous overbuilding of capacity and significant government subsidies from both central and local authorities, China is dominating world trade and production in steel. Over twenty U.S. steel companies have closed down operations, creating over 50,000 lost jobs in the U.S. alone. Globally and in the U.S., the steel industry has entered a period of consolidation that has caused more job losses as companies shed employees that have become superfluous. Chinese policies have also lead to Chinese auto-production capacity burgeoning to more than twice

Chinese demand. To make profits, Chinese and foreign producers alike in China have to export and to fight for global market share. U.S. producers have slashed prices, cut U.S. based capacity and shifted production and employment overseas to remain price competitive.

Over the next five years, the story should repeat globally in the other targeted industries. The government is encouraging Chinese companies to increase capacity and skills in desired product-markets of all the pillar industries. Chinese building of chip fabs has contributed to a growing overcapacity in chip production, accentuated by the present world-wide recession, which has hit the computer industry and its suppliers particularly hard. The central and local governments' incentives to draw investment and to build local competitors in the pillar industries, generally also build significant excess capacity. The excess capacity in turn forces both Chinese and global markets into severe price competition, creates razor-thin margins, and shifts competitive advantage to China and other countries willing to subsidize significantly their industries. The government is investing heavily in building brand equity for Chinese brands. However, I do not believe these efforts will have significant effects within five years, given the government's inability to enforce quality and safety standards on many Chinese manufacturers. I do believe that in the longer term, the Chinese government's brand-building efforts will pose a significant threat to American interests in particular, due to the position of our products in world markets. Though not true in all product markets, generally, customers see American brands as more mass-market than European and Japanese brands. This market position makes U.S. products more vulnerable to Chinese brand building than their European and Japanese counterparts.

U.S. Competitiveness:
Will U.S. companies be able to compete with Chinese state-owned companies that are able to tap government resources – including tax abatements, discounted land purchases, low-rate financing, and other subsidies? What role does forced technology transfer from U.S. to Chinese companies play in China's industrial policy?

U.S. companies can compete in some industries and market segments. However, the companies will have to initiate significant changes in industry structure, in their corporate strategy (focusing on innovation, especially process innovation), possibly in U.S. government policy, and their margins for error will be razor thin. The steel industry, an industry that the government of the People's Republic of China (PRC) took an early interest in developing, provides a good template for the future.

The Chinese government has invested heavily in developing its steel industry since the 1990's. As has been demonstrated in several studies by both independent researchers and the International Trade Commission (ITC), China's steel industry has been the recipient of significant subsidies and other government support. Hence the steel industry provides a good starting point for investigating what companies from the U.S. and other industrialized countries must do if they are to survive, if not prosper, in the face of a Chinese onslaught.

Industry structure: The steel industry provides examples of the structural changes in response to global, mostly Chinese, competition over the past ten to fifteen years. First, tremendous consolidation has occurred in both the U.S. and global steel industry. Globally, steel giants of previously unimaginable size, such as Arcelor-Mittal, have arisen. In the U.S., three giants dominate the steel industry - US Steel, Nucor, and Arcelor-Mittal's U.S. subsidiary. However, the U.S. giants are medium-sized by global standards, each less than 1/5th the size of Arcelor-Mittal, and less than 2/3d the size of each of the next three largest steel companies. US Steel is smaller than four different Chinese steel companies, Nucor smaller than five. Table 3 lists the 15 largest steel companies with their production capacity. To compete globally, further consolidation is desirable among U.S. steel companies.

Second, both product and process innovation have surged. Companies have developed super-light, super-strong steels and introduced these products into new vehicles. Super-light, super-strong steel allows the auto industry to replace more costly aluminum in autos, producing a lower-cost, structurally stronger vehicle with the same enhanced fuel efficiency achieved with aluminum. In the U.S., a joint research program between the American Iron and Steel Institute, the U.S. Army and Ford Motors developed the super-strong, super-light steel. However, Australia achieved much the same through a pre-competitive cooperative agreement, where companies in the same industries collaborate on research to develop technologies that are more costly or riskier than a single company can reasonably afford. Thus, the industry can focus on research crucial to its survival, but not necessarily of immediate interest to elements of national defense. Recognizing the success and potential threat of such strategies, China's State Council has declared that it will allocate special funds in its capital budget to promote the steel industry's technological progress, adjust its product mix, and raise the quality of Chinese steel (January 14, 2009).

Third, the steel industry around the world has attempted to gain direct control over supply of raw materials to control costs. Lakshmi Mittal has pointed to acquisition of raw materials as a primary goal of Arcelor-Mittal, as have Tata-Corus and the Chinese companies and government. Raw material costs have fluctuated wildly for much of the past decade, with demand and prices increasing significantly due to China's, and more recently, also to India's economic growth. By controlling sources of their own raw materials such as iron ore and coal, steel companies can reduce their costs and risk of doing business. Mexico's HYLSA (now owned by Techint of Argentina), which controls its own mines, and which for the last 15 years of its independence, had been the most profitable steel company in North America, provides a good example of the benefits of vertical integration.

Logistics, storage and shipping: These services form the backbone of value chains and distribution. Recognizing their importance to competitive advantage, SASAC has declared its determination to consolidate its logistics industry to make it much more efficient. It manifested this determination when in July of 2008 it consolidated over twenty logistics and trading companies under the umbrella of one of its asset-management corporations, the China Chengtong Group. SASAC places enormous importance on gaining efficiency and competitive advantage in logistical systems. Indeed, China Chengtong is one of the first two asset

management corporations that SASAC created; the other is the State Development Investment Corporation (SDIC). The SDIC manages SASAC's holdings in power, coal and fertilizers. Prior to this merger of logistics and trading companies, SASAC had arranged the merger of three shipping companies (in April, 2008). With these mergers, among others, the number of companies that the national (Beijing) SASAC oversees drops to 130.

Innovation and technology: U.S. companies will have to engage in constant product and process innovations just to survive, as they will not be able to compete on price. As has been mentioned several times, the PRC is investing heavily in technological innovation and quality enhancement in virtually all of its pillar industries. With much of their R&D expenses paid for by the government, a major element in the cost of new products and technologies is being minimized for Chinese companies. The development and design of a new auto costs Western auto companies anywhere from 2 ½ to 7 billion dollars. When the Chinese government covers the Chinese companies' quality and technological enhancement costs, it subsidizes the costs involved in making an auto suitable for global markets.

Brand equity: The PRC government and SASAC have recognized the importance and the power of branding. A recognized, high quality brand name provides one of the greatest competitive advantages a company can develop. Beijing has established a China Branding Strategy Committee to coordinate the governmental efforts to boost recognition of Chinese brands. Sun Bo, the Director of the Quality Management Department of the General Administration of Quality Supervision, Inspection and Quarantine recognized the economic value of brands when he said, "Branding is a decisive factor in the world's economic development, and in some cases, an established world brand's overall value is even bigger than that of a middle-sized country."[2] The government started its efforts to build a brand friendly business environment in China in 2001. Preliminary efforts dealt with educating business persons to recognize their competitors' copyrights, and went on to establish rankings of over 6000 branded Chinese products. The government has created a system whereby companies can apply for favored status for their brands. Beijing has declared some entirely domestic brands as "time-honored brands" making them cultural icons of the Chinese people. Favored brands that are also being exported, garner governmental support through export-tax rebates and facilitation of their export paperwork and documentation. In a recent policy statement (March 9, 2009), the Chinese government put on par the direct financial support for the export of favored, branded products with the support it gives to high-tech and agricultural products. Coca-Cola's recently (March 2009) failed attempted to acquire Huiyuan, a Hong Kong listed company that boasts a 42 percent share of the domestic market in pure fruit juices, illustrates the importance of brand equity for China: China's Ministry of Commerce did not want Coca-Cola to acquire the brand rights of Huiyuan and expressed concerns about the loss of a leading brand.

Government policy: Historically, U.S. government policy has sought to limit its major companies' size and monopoly power, and to prevent cooperative arrangements between manufacturers in their strategic activities. To compete against huge Chinese companies

[2] Xie Chuanjiao, December 21, 2006, *China Daily*

supplemented by Chinese government subsidies and other supportive policies, U.S. companies will either have to acquire equal size, compete on brand equity, compete on significantly superior product quality or technology, or focus on small market segments. U.S. major companies will have to become at least as large as their Chinese competitors to attain equal economies of scale and to minimize price differentials. They would need to offset as much as possible the Chinese companies' additional advantages in subsidies and government support through superior management and productivity. Unless they develop truly significant cost reductions through innovations in production processes, they are unlikely to compete on price. U.S. industry will have to rely on superior quality and technology because of the Chinese industries' habitual tendencies to overbuild capacity and to drive down prices through over supply at the products' larger, mass-market segments. To do this, the government must establish policies to encourage R&D, especially production-process R&D, or face the prospect of continuing job losses in industry after industry.

Conclusions:

The margin for error for U.S. companies will become slimmer, and the potential for error will significantly increase. Thus risks of failure and job losses will become far greater. Research has shown that business competitiveness drawing exclusively on research and innovation becomes riskier as difficulties arise in developing the right products for markets. U.S. companies will also have difficulty competing in industries where the market cannot perceive, or does not value, differences in quality between U.S. and Chinese goods. Under those circumstances, U.S. companies cannot compete on any basis with China's heavily subsidized industries. Industries where the U.S. is presently highly competitive, pharmaceuticals, processed foods, electronics and agricultural goods, are industries where consumers have difficulty discerning quality. Consequently, Chinese industrial policies on pillar industries will probably affect these industries.

Direct subsidies to Chinese industries hinder U.S. companies' abilities to compete in mass markets where low price constitutes the primary strategy. These direct Chinese subsidies combine with indirect Chinese subsidies to utilities and other industrial suppliers, as has occurred with Chinese power companies. On February 23, 2009, for example, SASAC allocated 12.67 billion Yuan ($1.9 billion) to five power companies. Its stated reasons included providing assistance to the power companies to support disaster reconstruction. However, opportunity costs come into play and if the government funds construction of new facilities in disaster-affected areas, capital for other building projects becomes more feasible. The government's funding policies reduce the power companies' costs across the board, and hence allow the power companies to pass on those reduced costs to all its customers. Another recent directive issued by SASAC on December 26, 2008, indicated that SASAC would require that power companies provide at least 50 percent of the capital for new projects. Previously, in a clear indication of just how heavily subsidized they were, state-owned power companies provided as little as 2 percent of the investment for new projects. The new state-owned capital management budget appropriated 54.78 billion Yuan ($7.7 billion) for capital investment and management, of which 27 billion Yuan ($3.8 billion) funds new projects and complements key state-owned enterprises' capital. Once again, because of chain cost reductions, these subsidies

to supplier industries, such as the power industry, help not only the state-owned enterprises that directly receive the funds, but their customers as well, and harm the interests of U.S.-based producers and workers.

Table 1
Pillar Industries by Chinese Governmental Criteria

Defense & Security
Aerospace
Computer chip design & manufacture
Computing & computer hardware
Iron & steel
Oil & petrochemicals
Software

Job Creation
Auto & Auto parts
Computer chip design & manufacture
Iron & steel
Machinery & mechanical devices
Information technology

Technology & Skill Acquisition
Bio-technology
Computer chip design & manufacture
Computing & computer hardware
Information technology
Software
Telecommunications

Competitive Advantage
Logistics, shipping & storage
Banking & Insurance
Brand equity
Machinery & mechanical equipment
Wholesaling & retail
Utilities & power equipment

Table 2
Steel Production in Millions of Tonnes*

	US	Annual Change	China	Annual Change	World	Annual Change	US Steel Ind. Employment	US Imports from China**
2008	91.5	- 6.8 %	502	+ 2.6 %	1,329.7	- 1.2 %	N/A	7,449.5
2007	97.2	- 1.4 %	489	+ 15.7 %	1,345.6	+ 7.6 %	97,540	4,357.8
2006	98.5	+ 3.8 %	418.8	+ 18.5 %	1250.4	+ 10.0 %	95,350	4,199.7
2005	93.9	- 5.8 %	349.4	+ 24.6 %	1136.5	+ 6.3 %	94,510	2,153.7
2004	99.7	+ 6.4 %	280.4	+ 26.1 %	1068.9	+10.2 %	96,620	1,866.6
2003	93.7	+ 2.2 %	222.3	+ 22.4 %	970.0	+ 7.3 %	100,210	371.4
2002	91.6	+ 1.7 %	182.2	+ 22.4	904.1	+ 7.6 %	108,200	369.8
2001	90.1		148.9		839.9			

*Source: SteelontheNet; J. G. Trench (2004); China Daily on Line; World Steel Association; US Census Bureau
**in $100,000's US

Table 3
The Largest Steel Companies, 2008

1. 116.4 Mton ArcelorMittal (Global)
2. 35.7 Mton Nippon Steel (Japan)
3. 34.0 Mton JFE (Japan)
4. 31.1 Mton POSCO (South Korea)
5. 28.6 Mton Shanghai Baosteel Group Corporation (China)
6. 26.6 Mton Tata Steel (India / Global)
7. 23.6 Mton LiaoNing An-Ben Iron and Steel Group (China)
8. 22.9 Mton Shagang Group (China)
9. 22.8 Mton HeBei Tangshan Iron & Steel Group (China)
10. 21.5 Mton United States Steel Corporation (United States)
11. 20.2 Mton Wuhan Iron and Steel (China)
12. 20.0 Mton Nucor Corporation (United States)
13. 18.6 Mton Gerdau (Brazil)
14. 17.9 Mton Gruppo Riva (Italy)
15. 17.3 Mton Severstal (Russia)

Source: World Steel Association