

### **SECTION 3: CHINA'S INDUSTRIAL POLICY AND ITS IMPACT ON U.S. COMPANIES, WORKERS, AND THE AMERICAN ECONOMY**

“The Commission shall investigate and report exclusively on—

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“ECONOMIC TRANSFERS—The qualitative and quantitative nature of the transfer of United States production activities to the People’s Republic of China, including the relocation of high technology, manufacturing, and research and development facilities, the impact of such transfers on United States national security, the adequacy of United States export control laws, and the effect of such transfers on United States economic security and employment.

“UNITED STATES CAPITAL MARKETS—The extent of access to and use of United States capital markets by the People’s Republic of China, including whether or not existing disclosure and transparency rules are adequate to identify People’s Republic of China companies engaged in harmful activities.

“WORLD TRADE ORGANIZATION COMPLIANCE—The compliance of the People’s Republic of China with its accession agreement to the World Trade Organization (WTO). . . .”

#### **Introduction**

China’s rapid industrialization and economic growth during the past 30 years has often been attributed to the economic reforms implemented in 1978 by Deng Xiaoping. These reforms were not based on traditional “free market” principles. China’s economic policy during this period has instead relied on a government-directed industrial policy to promote certain segments of the economy over others and to promote export-led growth. China has a process to develop and implement Five-Year Plans that identify broad goals—such as attracting foreign investment. The process then develops tools to accomplish those objectives—such as providing subsidies to companies to spur investment in plants, equipment, and technology.

While China prefers to be considered a market-oriented economy, it continues to engage in comprehensive economic planning, direction, support, and control from the central government. This reality undermines China’s claim that its economy is market driven rather than directed by government policy.

A widely shared goal in China is to make the country rich and powerful and to regain the nation’s former status as a great power

that controls its own fate.<sup>205</sup> China's overall industrial policy for realizing this goal is characterized by three main parts: (1) the creation of an export-led and foreign investment-led manufacturing sector; (2) an emphasis on fostering the growth of industries such as high-technology products that add maximum value to the Chinese economy; and (3) the creation of jobs sufficient to reliably employ the Chinese workforce, thereby allowing the Chinese Communist Party to maintain control. China adopts, modifies, and abandons other economic policies in order to meet these primary goals.

China's industrial policy is promulgated through a top-to-bottom process that has been outlined in 11 successive Five-Year Plans adopted by the State Council and implemented by the central and provincial governments at the direction of officials of the Communist Party. China has designated certain industries that are to remain government owned and others that are to remain government controlled. Both are to be favored with direct and indirect subsidies.<sup>206</sup> (For more information on China's strategic industries, see chap. 1, sec. 2, of the Commission's 2007 Annual Report to Congress.)

China's goal of attracting foreign companies to invest in China has been combined successfully with its goal of nurturing state-owned enterprises, most notably in the manufacturing of automobiles. China transformed itself in just two decades from a nation of bicycles to the largest producer and consumer of cars in the world.<sup>207</sup> Over the years, China has used subsidies and tax incentives both to attract foreign investment and to facilitate growth among favored industries. At the same time, China has instituted a variety of barriers to trade in order to protect domestic industry from foreign competition. Finally, China's currency, labor, and environmental practices and laws as well as other policies provide further support to domestic industries.

Governments at all levels in China are required to follow the State Council's Five-Year Plan creating an *actual advantage* for Chinese goods in the global marketplace.<sup>208</sup> This collection of government tools—industrial policy—can bestow a large advantage on favored industries and the economy as a whole. While some of these tools are World Trade Organization (WTO)-compliant in the hands of government, other tools advocated by the Five-Year Plans fall outside the boundaries of the international trade rules and agreements to which China is a party. A close examination of China's evolving industrial policy, its effect on America, and the use of possible remedies to counter unfair or illegal actions is essential to understanding the overall health of the U.S. economy.

### **China Promotes Domestic Industries**

China's policies for promoting domestic industries have evolved over the years from providing simple land and energy subsidies to offering sophisticated tax-reduction measures and technology transfer incentives, as well as a variety of other measures. The primary objective of these policies has been to attract foreign investment and to promote its economic capability, which has paid off handsomely for China. China's total foreign direct investment grew from

a yearly trickle of a few billion dollars in the 1980s to more than \$80 billion annually by 2008, of which \$15 billion came from the United States in 2008 alone.<sup>209</sup> In 2003, China overtook the United States as the destination for the largest amount of foreign direct investment in the world.<sup>210</sup> Although foreign direct investment to China has been declining and was down nearly 18 percent in the first half of 2009, China retained its lead among favored destinations.<sup>211</sup>

China uses foreign direct investment to achieve greater domestic growth through exports but also for access to foreign technology. The main driver of exports out of China has been foreign-invested enterprises (both foreign owned and joint ventures), which accounted for roughly 55 percent of the total exports in 2008 (or \$790 billion), according to Terence Stewart, a Washington trade attorney who studies China's industrial policy and export promotion.<sup>212</sup> For example, two-thirds of the growth in exports of electronic information products from China in 2007 originated from foreign-owned companies, and one-sixth was from joint ventures.<sup>213</sup>

But it is also clear from China's industrial policy that promoting joint ventures and foreign investment is not Beijing's ultimate goal. A large and/or globally dominant state-owned and -controlled sector is the actual goal.<sup>214</sup> Recent policy initiatives by the Chinese government, such as the new corporate income tax that is discussed later in this section, have focused more on shielding national champions<sup>215</sup> from foreign competition than on attracting further investment from overseas, according to Clyde Prestowitz, president of the Economic Strategy Institute, a Washington economic think tank, who testified before the Commission in March. Joint ventures between Chinese and foreign companies have in some cases seen their subsidies reduced.<sup>216</sup>

### ***Subsidies***

China has long provided subsidized energy and water to many manufacturers, despite the fact that China must import large quantities of oil and gas and already has very limited supplies of water for agricultural purposes. Also, many manufacturers have been offered free or discounted land, particularly in the vast, government-run industrial parks.<sup>217</sup> Today, China's subsidies still include free land and discounted electricity, but support for business is also growing more subtle and harder to detect. This support includes tax incentives for investment, funding for research and development, refunds of value added taxes (VAT) on exports, and the construction of strategically planned industrial parks in favored locations. Commissioners visited one such park near Nanjing, where the government has set aside a vast stretch of land; constructed roads and other infrastructure, including a scenic lake; and set out a welcome mat for foreign investors. The principal intent remains the same: to attract foreign investors to locate research, manufacturing, and service centers to China. Although many of America's Fortune 500 companies might have moved to China regardless of subsidies in order to have better access to China's 1.3 billion consumers,<sup>218</sup> the extensive web of subsidies certainly helped make the investments more attractive.

A study conducted by Capital Trade Inc. for the Commission found that China's subsidies to strategic and heavyweight industries played a role in facilitating the relocation of U.S. operations to China. According to this study,\* China's desire to control and guide the development of key industries is singular, but the goals of this support vary substantially from industry to industry.<sup>219</sup> In some cases, the Chinese government is seeking to upgrade the industry's technological sophistication, while in others it is trying to ensure that its companies have the financial means to secure needed resources for China.<sup>220</sup> The study concludes that the Chinese government has the necessary leverage to compel firms to act, because usually the majority or primary owner of each firm is a state-owned enterprise.<sup>221</sup>

**INDUSTRIES IDENTIFIED BY THE PEOPLE'S REPUBLIC OF CHINA AS  
"STRATEGIC" AND "HEAVYWEIGHT"**<sup>222</sup>

**Strategic Industries:**

- (1) Armaments
- (2) Power Generation and Distribution
- (3) Oil and Petrochemicals
- (4) Telecommunications
- (5) Coal
- (6) Civil Aviation
- (7) Shipping

**Heavyweight Industries:**

- (1) Machinery
- (2) Automobiles
- (3) Information Technology
- (4) Construction
- (5) Iron, Steel, and Non-Ferrous Metals

Some subsidies are exclusive to domestic companies. For example, China's state-owned banking sector is directed by the Chinese government and by Chinese Communist Party officials to make loans directly to Chinese companies.<sup>223</sup> These loans are offered at below-market interest rates and are issued without expectation of repayment. China's banks built up a vast portfolio of nonperforming loans during the 1990s as a result of this practice. China subsequently has managed to recapitalize many of the banks that had devoted so much of their capital to unsecured and risky loans, but that free money has contributed to China's favored industries and made some of them even more formidable competitors.<sup>224</sup> The Chinese government's new stimulus plan is directing state banks once again to make questionable loans to state-owned companies.<sup>225</sup>

China's export subsidies and the special treatment for Chinese-owned companies violate China's obligations as a member of the World Trade Organization.<sup>226</sup> The U.S. government has tried to deal with the distorting effect of Chinese subsidies, with some limited success. In December 2008, the United States, along with Guatemala and Mexico, initiated a WTO case concerning measures offering grants, loans, and other incentives in support of China's "Famous Brands" programs. The purpose of the "Famous Brands" program is to promote the recognition and sale of Chinese brand products overseas. The U.S. government charged that these programs utilize various export subsidies, including cash grant awards, preferential loans, research and development funding to develop new products, and payments to lower the cost of export credit insurance.<sup>227</sup> At the time of the writing of this Report, the decision was still pending.

\*For more information about Capital Trade's study, *An Assessment of China's Subsidies to Strategic and Heavyweight Industries*, visit the Commission's Web site: <http://www.uscc.gov/researchpapers/2009/CAP%20TRADE%20China%27s%20Subsidies%20to%20Strategic%20%20Heavyweight%20Industries%20-%20FINAL%20Report%2023March2009.pdf>.

Starting in 2007, representatives of the U.S. paper, steel, tires, furniture, and chemical industries alleged injury from Chinese subsidies and petitioned the administration for relief in the form of countervailing duties.<sup>228</sup> The U.S. Department of Commerce determined that certain Chinese subsidies<sup>229</sup> violated U.S. countervailing duty laws, and by August of 2009, it initiated 19 investigations and issued 11 countervailing duty orders concerning China, with eight other investigations currently pending.<sup>230</sup>\*

### ***Income Tax Preferences***

China has also used income tax breaks both to attract foreign direct investment and to encourage exports from domestic manufacturers. For years, foreign investors in China have benefited from investment incentives such as tax holidays and grace periods.<sup>231</sup> For example, if a foreign company relocated to an industrial park in China, the company's income tax rate for the first two years would be zero, and then the company would be taxed at only half the normal rate for the next three years. If the company were located in certain high-technology areas, the tax might never exceed 15 percent.<sup>232</sup> For years, the Chinese government has made income tax preferences available to foreign-invested firms in connection with their purchase of domestically manufactured equipment. A similar measure has made an income tax refund available to domestic firms for purchases of domestically manufactured equipment for technology upgrading.<sup>233</sup> These measures have encouraged foreign investment and promoted the purchase of domestic goods over foreign imports.

In February 2007, the United States and Mexico requested consultations with China concerning measures granting refunds, reductions, or exemptions from taxes and other payments owed to the Chinese government by enterprises in China.<sup>234</sup> The U.S. government argued that these Chinese government tax regulations constituted illegal (WTO inconsistent) import and export subsidies to various industries in China (such as steel, wood, and paper) that distort trade and discriminate against imports.<sup>235</sup> This WTO dispute was settled with the signing of a memorandum of understanding in which China agreed to end all of these preferential tax incentives by January 1, 2008.<sup>236</sup> At the time of the writing of this Report, there have been no complaints that China has not been fulfilling its obligations under this memorandum of understanding. (For more details about this case, see chap. 1, sec. 1, of this Report.)

In March 2007, China passed a new corporate income tax law to comply with the conditions of the memorandum of understanding. This law is also structured to steer the economy away from low-skilled, labor-intensive manufacturing.<sup>237</sup> The new law went into effect on January 1, 2008, imposing a unified, 25 percent corporate tax rate that applies to both foreign and domestic corporations. The uniform tax code will be phased in over a five-year period, raising the tax rate for foreign-invested enterprises from 15 percent in 2007 to 25 percent by 2012.<sup>238</sup> However, the law includes excep-

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\*In September 2008, the Chinese government brought a WTO case of its own to challenge the legality of the U.S.'s application of countervailing duties on imports from China, which is still pending.

tions in the application of the new rate on qualified, high-technology companies registered in special economic zones, or companies investing in agriculture, or public infrastructure projects, or environmental protection, or energy/water conservation projects.<sup>239</sup> For those types of companies, the tax rate will still be 15 percent. According to the U.S. Trade Representative's (USTR) 2009 report on foreign trade barriers, domestic enterprises have long objected to rebates and other tax benefits enjoyed by foreign-invested firms.<sup>240</sup> Therefore, the current arrangement will be more equitable for Chinese firms. It will likely result in narrowing profit margins for foreign-invested enterprises in China.

### ***The Value Added Tax***

China has consistently used the value added tax as an instrument of industrial policy, applying the VAT selectively to penalize imports and to encourage exports. The VAT, which has been adopted by 140 countries, including most industrialized countries other than the United States, is applied to manufactured goods at each stage of production. China levies a 17 percent VAT on the value of most goods. However, this 17 percent rate is rebated selectively on exports and applied to all imports.

Two other uses of the VAT by China appear to violate the WTO rules to treat domestic and imported goods within a country equally, a concept known as "national treatment." China in some cases rebates part of the VAT for domestic producers selling in China but applies the full VAT to similar imports. This differential treatment has continued even after China's accession to the WTO.<sup>241</sup> Furthermore, the VAT disadvantage is compounded when China applies the VAT on all costs associated with imports, such as freight, insurance, and tariff costs, in addition to the actual value of all imported items.<sup>242</sup>

Based on the most recent data compiled by the Trade Lawyers Advisory Group, the VAT disadvantage to U.S. producers and exporters as a result of China's discriminatory application of the VAT is estimated at \$55 billion in 2008.<sup>243</sup>

China applies different rules for rebating its VAT in order to promote select industries. Following are examples of other VAT rebate programs provided by the Chinese government with that intent, as they have been identified by the U.S. Department of Commerce in the course of subsidies investigations:

- The government of China refunds the VAT on purchases by foreign-invested enterprises of certain domestically produced equipment. Producers are only required to present documents showing foreign-invested enterprise status in order to receive the rebates.<sup>244</sup>
- The Chinese government exempts both foreign-invested enterprises and certain domestic enterprises from the VAT and from tariffs on imported equipment used in their production facilities. The objective of the program is to encourage foreign investment and to introduce foreign advanced technology equipment and industry technology upgrades.<sup>245</sup>
- High-technology or labor-intensive enterprises in select Economic Development Zones with investment over 3 billion

renminbi (RMB) (\$438 million) and more than 1,000 local employees may be refunded 25 percent of the VAT paid on domestic sales (the percentage of the tax received by the local government) starting in the first year the company has production and sales. The VAT refund can continue for five years.<sup>246</sup>

Starting in 2007, the Chinese government has been reducing the VAT rebate on exports of labor-intensive goods in an effort to direct the economy away from low-end production and more toward high value-added exports. However, this policy was reversed late in 2008 as part of China's stimulus program, to increase Chinese exports and to preserve jobs in low-end manufacturing, such as textiles and apparel. In particular, in December 2008 the Chinese government raised VAT rebates to 27.9 percent on 3,770 types of exported goods.<sup>247</sup> Value-added taxes for businesses subsequently were cut 120 billion RMB (\$17.5 billion), and rebates have been expanded to cover up to 30 percent of Chinese exported goods. Some excise taxes have also been reduced.<sup>248</sup> (For more details on China's stimulus plan, see chap. 1, sec. 2, of this Report.)

### **China's Policies to Protect Domestic Industries**

China has been protecting and nurturing its domestic industries while it has been attracting foreign investment to further promote its industrial development. Most of the methods detailed below are illegal under the WTO agreements as prohibited barriers to trade, and the United States has responded by bringing WTO cases against China to correct such trade-distorting measures. However, the WTO's trade remedy provisions, as well as its dispute settlement procedures, are specifically designed to address narrow issues and may be limited in their ability to address the negative impact of China's broad, industrial policy.<sup>249</sup>

#### ***Export Restrictions***

Export restrictions or export quotas, especially on energy and raw materials, have two general effects: First, they suppress prices in the domestic market for these goods, which lowers production costs for industries that use the export-restricted materials; and second, these restrictions increase the world price for the raw materials that are affected by limiting the world supply, thereby raising production costs in competing countries.<sup>250</sup>

According to the USTR, "despite China's commitment since its accession to the WTO to eliminate all taxes and charges on exports, including export duties . . . China has continued to impose restrictions on exports of certain raw materials,<sup>251</sup> including quotas, related licensing requirements, and duties, as China's state planners have continued to guide the development of downstream industries."<sup>252</sup> The USTR's 2009 report on foreign trade barriers concludes that "China's export restrictions affect U.S. and other foreign producers on a wide range of downstream products such as steel, chemicals, ceramics, semiconductor chips, refrigerants, medical imagery, aircraft, refined petroleum products, fiber optic cables, and catalytic converters, among many others."<sup>253</sup>

In June 2009, the Obama Administration initiated a WTO case against China over export restraints on numerous important raw materials. U.S. officials have been concerned for years about export

restraints on raw materials from China and, in cooperation with European and Japanese officials, have held regular bilateral and multilateral discussions with Chinese officials since China joined the WTO, before the WTO's Import Licensing Committee.<sup>254</sup> The USTR reports that these efforts had no effect and that China in fact increased export restraints on raw materials over time.<sup>255</sup> According to the USTR, "China's measures appear to be part of a troubling industrial policy aimed at providing a substantial competitive advantage for the Chinese industries using these inputs."<sup>256</sup> Others have reported concerns that China's export restrictions are part of a larger effort to stockpile resources in order to insulate China from sudden fluctuations in global commodities markets and to increase China's ability to influence those markets.<sup>257</sup>

### **China's Restrictions on Exports of Rare Earth Minerals**

China appears to be tightening its control over the supply of rare earth elements, valuable minerals that are used prominently in the production of such high-technology goods as flat panel screens and cell phones, and crucial green technologies such as hybrid car batteries and the special magnets used in wind turbines.<sup>258</sup> Rare earth minerals are also critical for many military technologies, including the magnets used in the guidance systems of U.S. military smart bombs like Joint Direct Attack Munitions, and super-alloys (used to make parts for jet aircraft engines).

China accounts for the vast majority—93 percent—of the world's production of rare earth minerals, and for the last three years it has been reducing the amount that can be exported.<sup>259</sup> After a draft policy outlining the tightening of exports for rare earth minerals was issued in August 2009 by the Ministry of Industry and Information Technology, Zhao Shuanglian, deputy chief of the Inner Mongolia autonomous region, spoke out to quell global concerns. According to Mr. Zhao, rare earth elements are "the most important resource for Inner Mongolia," which contains 75 percent of China's deposits, and by cutting exports and controlling production, the government wants to "attract users of rare earths to set up in Inner Mongolia" to develop manufacturing.<sup>260</sup> China also is taking steps to consolidate its rare earths industry, with the aim of creating a consortium of miners and processors in Inner Mongolia.<sup>261</sup>

China's Ministry of Industry and Information Technology says it is limiting production in some mines and closing others completely because some of the rare earths are extracted under dire environmental conditions, but tighter limits on exports of rare earths place foreign manufacturers at a disadvantage compared to the domestic producers, whose access will not be so restricted. There has been no official U.S. government response so far, but a spokeswoman for the U.S. embassy in Beijing questioned the WTO-legality of such restrictions, noting that "[w]e would be concerned by any WTO member's policies that appear to be inconsistent with its WTO obligations."<sup>262</sup>

### ***Trading Rights Authorization***

Prior to its WTO accession, China restricted the types and numbers of commercial enterprises that were allowed to import and export. Only those domestic and foreign firms with trading rights could import goods into, or export goods out of, China. This internal control measure, intended to nurture and promote domestic industries, remained in place until 2004, when China finally had to liberalize its trading rights regime as part of its WTO accession. However, China has retained some restrictions on trading rights, thereby putting foreign firms at a disadvantage.

Granting trading rights selectively has been one way in which the Chinese government implements its ambitious industrial policy. Industries that have been affected by China's use of licensing regulations include autos, telecommunications, pharmaceuticals, and the scrap recycling industry. In the case of scrap recycling, which is also affected by China's licensing regulations and constitutes one of the largest U.S. exports to China by value (more than \$7.56 billion dollars in 2008), China limited imports by justifying restrictions under the rubric of health and safety.<sup>263</sup> Starting in 2003, reportedly due to frequent receipt of dangerous waste and illegal material in past overseas shipments, the Chinese government established a registration program as well as a pre-shipment inspection requirement to be conducted by Chinese-authorized inspectors at the shipment's origin point.<sup>264</sup> Currently, according to the USTR, U.S. scrap suppliers continue to report unexplained delays in application approvals and to face problems with new requirements imposed with little or no notice.

Although China has greatly liberalized its trading rights regime since its WTO accession (within the limits of its accession protocol, which still allows for restrictions in certain categories, such as petroleum, sugar, grains, and fertilizers), it has not yet given licensees trading rights for the import of copyright-intensive products such as theatrical films, DVDs, music, books, and journals.<sup>265</sup> The Bush Administration filed two WTO cases in response to China's trading rights restrictions. (For more details about these cases, see chap. 1, sec. 1, of this Report.)

### ***Local Content Rules ("Buy Chinese")***

Local content rules, or "buy domestic" practices, are one of the most effective ways in which a government can promote and protect its domestic industries. China regularly follows internal rules that "direct central and sub-central government entities to give priority to local goods and services, with limited exceptions."<sup>266</sup> Recently, China introduced "buy Chinese" regulations as part of its stimulus plan. China is not a signatory to the WTO Government Procurement Agreement and therefore is not subject to its limitations, although it did commit in its Protocol of Accession to the WTO to join the agreement "as soon as possible." Similarly, because China is not part of the Government Procurement Agreement, the United States does not have to extend equal treatment to China. The U.S. government still hopes that China will join the WTO's Government Procurement Agreement, but in the Strategic and Economic Dialogue in July, the United States was once again

unable to secure a commitment from China that Beijing would sign the document by the end of this year.<sup>267</sup> (For more information on China's accession to the WTO's Government Procurement Agreement and China's recent "buy Chinese" regulation, see chap. 1, sec. 1, of this Report.)

One industry that has clearly benefited from China's local content rules is telecommunications equipment. Since 1998, the Ministry of Information has had in force an internal circular "instructing telecommunications companies to buy components and equipment from domestic sources."<sup>268</sup> More recently, China has been using local content rules to shield its clean energy sector. China has built the world's largest solar panel manufacturing industry and exports more than 95 percent of its output to the United States and Europe. However, when China authorized the construction of its first solar power plant this spring, it required that at least 80 percent of the equipment be made in China.<sup>269</sup> Furthermore, when the Chinese government requested proposals this spring for 25 large contracts to supply wind turbines, every contract was won by one of seven domestic companies. All six multinationals that submitted bids were disqualified on various technical grounds, such as allegedly not providing sufficiently detailed data.<sup>270</sup>

The biggest beneficiaries of China's local content rules are China's auto and auto parts manufacturers. In May 2004, the Chinese government issued a new automobile industrial policy that included provisions discouraging imports of automobile parts and encouraging the use of domestic technology in new vehicles assembled in China.<sup>271</sup> As part of this industrial policy, Beijing levied a new 25 percent import tariff on cars if they were made predominantly of imported parts. The Chinese auto industry has been growing quickly in recent years; by the end of 2009, China is expected to become the world's biggest vehicle producer.<sup>272</sup> In the first nine months of 2009, a total of 9.66 million passenger cars were sold in China, compared to 7.8 million cars and light trucks sold in the United States during the same time.<sup>273</sup>

In March 2008, the United States, along with Canada and the European Union, initiated a WTO case against China for China's use of these discriminatory regulations as applied to imported auto parts. The United States won both this case and the subsequent appeal filed by China. In January 2009, China promised that it would comply with the recommendations and rulings of the WTO.<sup>274</sup> On August 28, 2009, the Chinese government announced the reduction of its steep tax on imported auto parts for cars that do not meet certain local content standards. But this action may have come too late for U.S. domestic auto parts manufacturers. China's remedial action was delayed by lengthy negotiations, during which time many automakers moved their production to China. These automakers stopped using imported auto parts for the cars they assembled in China.<sup>275</sup>

### ***National Standards***

China has used the standards-setting process to advance its domestic industries and to protect them from foreign competition. The Chinese government dominates the process by drafting most national standards without any foreign or public input or only letting

foreign representatives “be observers without voting rights.”<sup>276</sup> For example, China gives its wireless telecommunications equipment manufacturers and operators a competitive advantage by developing a domestic standard and then forcing foreign companies to adopt it for their Chinese products and operations. Furthermore, the Chinese government is supporting the development of a domestic cell phone battery standard that may force U.S. manufacturers to redesign their products, at a considerable cost.<sup>277</sup> (For more on the use of standards by the Chinese government, see the portion entitled “Using Standards to Strengthen Domestic Firms” later in this section.)

### ***Technology Transfers***

The development of new and advanced technologies is paramount for staying competitive in manufacturing. China has been particularly successful in utilizing joint manufacturing ventures and joint research efforts to achieve technology transfers. Since the early 1990s, when China began aggressively to promote domestic technological innovation, it has developed policies to encourage technology transfers.<sup>278</sup> Some of the early approaches that China used included setting requirements for foreign companies to donate equipment and to establish research labs.<sup>279</sup> The United States recognized the danger of such transfers when it negotiated with China in the late 1990s on the terms of China’s eventual 2001 entry into the WTO. In its WTO accession agreement, China was required expressly to forgo any forced technology transfer arrangements with foreign companies. (For more on the transfer of research labs by U.S. companies to China, see chap.1, sec. 4.)

Despite such commitments, China has insisted that portions of commercial passenger jets be manufactured and assembled in China as a condition for purchasing them, a practice known as “offsets.” A key objective for China is acquiring technology from American and European aerospace companies so that it can independently manufacture its own aerospace products. (For further discussion of this issue, see the Commission’s 2008 Report to Congress.) As a result of these efforts, in June 2009 Airbus delivered its first commercial jet fully made in China. Airbus is expecting that China will need more than 3,200 passenger planes in the next 20 years, valued at almost \$400 billion, an order book that Airbus certainly took into account when deciding to shift final assembly to China.<sup>280</sup> In addition, AVIC, the state-owned Chinese aerospace company, has produced a regional jet for commercial sale that was developed with the benefit of technology and other assistance from western companies. In May 2008, Premier Wen Jiabao was reported to have said, “This is the dream of several generations, and we will finally realize it. We should rely on ourselves to build the large planes’ main technologies, materials, and engines.”<sup>281</sup>

### **General Market Conditions that Favor Relocation to China**

This section describes three elements of China’s industrial policy: (1) low wages and unfair labor standards, (2) lax enforcement of environmental protection laws, and (3) the manipulation of its exchange rate regime. China has made it profitable for companies

from around the world to move production facilities to China and more recently to expand research and development there as well.<sup>282</sup> “In particular,” said Ralph E. Gomory, a research professor at New York University’s Sloan School of Business, “China is wisely exploiting the fact that the capabilities of today’s global corporations are available to the bidder who offers the highest profit.” The result has been to create jobs in China, particularly in export industries.

### ***China’s Low Wages and Unfair Labor Standards***

Unions and worker rights organizations have complained that Chinese companies do not pay their employees even the Chinese minimum wage levels. Employers also withhold promised health benefits from employees and subject employees to forced labor.<sup>283</sup> Last year, however, the Chinese government implemented a new labor law intended to combat forced labor, withholding of pay, and other abuses by providing for formal contracts and severance pay.<sup>284</sup>

Although the text of the new labor law seems to address the persistent injustices, the law’s implementation and enforcement have been spotty.<sup>285</sup> The major deficiency of the new labor law is the continued restriction on union organizing and collective bargaining. According to the Congressional-Executive Commission on China, the labor contract law does not include provisions to guarantee equal bargaining power between workers and employers. Because there is only one legal trade union in China (the All-China Federation of Trade Unions), which is required to “uphold the leadership of the Communist Party,” all the trade unions remain under the control of management.<sup>286</sup>

This new labor law provoked an outcry from some business organizations representing foreign-invested enterprises. They claimed that the legislation would drive up costs and make doing business in China more difficult.<sup>287</sup> The American Chamber of Commerce in Shanghai complained that the law “could have a negative impact on the investment environment in China,” while the European Union Chamber of Commerce argued that “the rigid provisions of the draft law will restrict employer flexibility, and ultimately will increase costs for Chinese producers.”<sup>288</sup>

### ***China’s Lax Enforcement of Environmental Protection Laws***

China is rapidly becoming one of the most polluted countries in the world.<sup>289</sup> Although China has some strict environmental laws on the books, the fines that can be levied to enforce the regulations are so insignificant that they are seen merely as a cost of doing business rather than a true deterrent.<sup>290</sup> Furthermore, the Chinese state environmental protection agency is critically understaffed; it has 300 employees compared to the U.S. Environmental Protection Agency’s 20,000 employees.<sup>291</sup>

China’s weak enforcement provides a variety of cost advantages to both domestic and foreign industries. Companies operating in China can save money by not providing protective equipment for workers, by not investing in expensive pollution control technologies, and by not properly disposing of their waste.<sup>292</sup> Further-

more, some of China's pollution also reaches the United States, as the Commission heard during its 2008 hearing on China's energy policies and their environmental effects. U.S. scientists on the West Coast have used a variety of tools to trace the flow of air pollution from Asia (including China) and have found that air pollutants such as ozone and mercury do reach the United States and degrade air quality. (For further information, see the Commission's 2008 Report.)

The Chinese government acknowledges its environmental problem and has adopted the related goals of protecting the environment and shifting to cleaner energy sources. However, China's industrial policy continues to promote investment in energy-consuming production activities.<sup>293</sup> For example, Beijing has spent lavishly on nuclear, gas, and wind power in an attempt to diversify the country's energy sources and move away from coal, and it has tried to close small coal mines.<sup>294</sup> Despite those efforts, coal production jumped from 525 million tons in 2002 to 1.26 billion tons in 2008, and China increased its coal burning by 7 percent in 2008. China accounted for 43 percent of global coal use in 2008.<sup>295</sup> The need for greater industrial production always seems to take precedence over environmental protection, especially now that China is struggling with declining exports.<sup>296</sup>

### ***China's Exchange Rate Regime***

Through strict capital controls and the coordinated efforts of the central bank and the Ministry of Finance, the government of China has frozen the value of the RMB at about 6.8 to the dollar since June 2008. If the RMB were allowed to float and to be traded on international markets, as is the case with most major trading nations, the RMB would climb in value.<sup>297</sup> By keeping the value of the RMB artificially low, China provides an incentive to foreign corporations to shift production there, because it reduces the price of investing in China and makes their exports from China cheaper. China's currency manipulation has been addressed in previous Annual Reports and is also described in section 1 of this chapter.

Derek Scissors, an economist at The Heritage Foundation, suggests that encouraging Beijing to liberalize its capital account will allow money to move freely in and out of China, which was once one of the goals for China's admission to the WTO.<sup>298</sup> "It was once assumed that the difficult process of liberalizing China's capital account would occur naturally as the country started complying with the conditions for its accession to the WTO," said Dr. Scissors.<sup>299</sup> So far there has been no progress, and the Chinese government has shown little interest in allowing multinationals, much less Chinese citizens, to freely send earnings or savings out of the country.<sup>300</sup>

Capital account liberalization would allow for easier repatriation of profits by foreign firms operating in China. It would reduce state intervention in the Chinese economy. It would allow Chinese citizens and businesses to purchase goods directly from other countries and even to invest abroad, reducing trade and capital imbalances. Chinese banks would lose some of the guaranteed deposits they now enjoy. That, in turn, would inhibit the type of state-directed lending that has effectively blocked privatization and hindered

competition.<sup>301</sup> Dr. Scissors concluded that although such liberalization is still far in the future, it is a goal worth pursuing now. He noted, however, that even if China were compelled to revalue the RMB against the dollar, the Chinese government's most obvious countermeasure would be to raise the export tax rebate, as it has already done several times since the global financial crisis reduced global demand.<sup>302</sup>

### **The Impact of the WTO on China's Industrial Policy**

The primary objective of China's accession to the WTO, both for the United States and the rest of the world, was to expand access to the Chinese market by lowering tariffs, quotas, and regulatory barriers and to facilitate foreign investment in China.<sup>303</sup> While in the past some progress had been achieved, 2009 was marked by a reversal in market access. While foreign direct investment in China has grown dramatically since China joined the WTO, market access has been hampered, and domestic industries still enjoy preferential treatment. Since China's accession to the WTO, the United States has initiated eight cases against China, three of which were decided by a dispute panel, three of which were settled by a memorandum of understanding, and two of which are still pending. Of the six cases that have been completed, the United States views the resolution of all as marginally favorable. (For more details on U.S. WTO cases against China, see chap. 1, sec. 1, of this Report.)

The United States prevailed in its challenge of China's discriminatory corporate tax policy, yet China has not stopped subsidizing and helping its domestic industries. The United States had to bring a second WTO case challenging China's grants, loans, and other incentives. The United States also prevailed in its challenge of China's VAT rebates, but that decision was limited to the integrated circuits industry. China still rebates the VAT in a way that benefits other domestic industries and distorts trade. The United States prevailed in its challenge of China's trading rights restrictions; however, once again, all China had to do was amend its laws, as they relate only to the two industries that were the subject of the two challenges—financial information service suppliers and audiovisual entertainment products suppliers. The WTO might be a forum for addressing industry-specific issues but not for dealing with the more systemic imbalances caused by China's industrial policy.

Part of the problem, according to Mr. Prestowitz, is that the WTO rules, largely carried over from the General Agreement on Tariffs and Trade (GATT) and eight rounds of global trade negotiations dating back more than 40 years, assume free, perfectly competitive markets; no economies of scale; and fixed exchange rates.<sup>304</sup> Because the GATT and its successor, the WTO, were initially a collection of countries with capitalist systems and relatively low, nonmarket trade barriers, the WTO does not adequately address problems arising from industrial policies. It also does not deal with other factors such as lax environmental laws or workers' rights abuses.

Furthermore, the Chinese leadership sees nothing inconsistent between the current WTO rules and China's brand of capitalism. "There has not been a vision about China's future that has not in-

cluded a central role for the state as the ultimate source of guidance and control, even allowing for all of the reforms and the introduction of market mechanisms throughout the last 30 years,” said Denis Simon, professor at Penn State’s School of International Affairs.<sup>305</sup> The pursuit by the United States of a global market economy and China’s state-controlled, export-led growth model “is like one team playing football and one team playing baseball,” Mr. Prestowitz noted.<sup>306</sup>

The Obama Administration is continuing the Bush Administration’s Strategic Economic Dialogue as the Strategic and Economic Dialogue, reflecting the larger role in the talks that the State Department is having. The long-running Joint Committee on Commerce and Trade, led by the Commerce Department and the USTR, will continue. The United States and China are also negotiating a Bilateral Investment Treaty, which could be used to address investment, labor, and environmental practices.

### **Incentives Offered by China to Attract High-technology Investment**

The Chinese government’s initial efforts in industrial development were focused on developing manufacturing, from such heavy industries as steel to assembly lines for basic household items. With the more recent Five-Year Plans, the emphasis has been shifting away from labor-intensive operations to more capital-intensive production.<sup>307</sup> The Chinese government has been trying to develop its manufacturing and design capabilities in the computing, telecommunications, and software development sectors, but it was not until the collapse of the high-tech bubble of 2001–2002 that the conditions were right for foreign companies to relocate their operations to the Chinese mainland.<sup>308</sup> U.S. companies suffered heavy losses during that period, so they went looking for ways to cut their operating costs. China’s gradual maturation, both as a manufacturer of advanced technology products and as a consumer of electronics and information technology products, coincided with the U.S. collapse. Since then, American, Japanese, and Taiwanese manufacturers and researchers have relocated aggressively to China. The low cost of labor along with government investment in high-tech industrial parks—and a variety of direct and indirect subsidies—created an attractive environment for foreign companies hit hard by the tech-bubble collapse.<sup>309</sup> China’s global exports of information technology products (which include computers, semiconductors, telecommunications, and photonics products) during 2000–2004 grew nearly fourfold, from \$54 billion to \$201 billion. China’s trade surplus with the United States in information technology products also experienced its largest growth during 2000–2004, increasing more than six times, from \$5 billion to \$35 billion.<sup>310</sup>

To accelerate the growth of the information technology sector, the Chinese government has used direct and indirect subsidies, including low- or no-cost loans, tax concessions, grants of land and infrastructure, and government support for graduate education and for research and development.<sup>311</sup> At the same time, the Chinese government has fostered the development of Chinese manufacturers

through requirements that foreign suppliers establish joint ventures with Chinese partners, build manufacturing plants in China, transfer technology, and offset their imports of component parts through domestic purchases.<sup>312</sup> China also seeks to speed up its scientific and technological development by sending students and scholars abroad for advanced training, purchasing vast amounts of foreign technology, developing a foreign investment regime to attract foreign high-tech companies, and signing a large number of agreements with other governments for scientific and technological cooperation.

China is primarily a reexport platform for electronics. Foreign firms dominate China's information technology hardware market. Telecommunications and information technology are very knowledge intensive, and holders of patents and standards guide the entire industry. Almost all internationally important standards that generate revenue (through licensing) are held by western companies. Foreign standards are viewed as a constraint on China's technological development because of the need to pay license fees. If China develops its own innovative, internationally recognized standards for its market, foreign companies that want to do business in China either will have to pay licensing fees to enter the market, or they will have to withdraw from the market. By denying foreigners access to its market through the use of standards, China will effectively protect its domestic industries.

### ***Using Standards to Strengthen Domestic Firms***

Proprietary technology and domestic standards are seen in China as a potential means of strengthening the market position of domestic firms while diminishing that of foreign competitors. The Chinese government largely views standards not as mechanisms for encouraging innovation but as a matter of national prestige, security, and revenue creation through generating royalty income that benefits domestic firms.<sup>313</sup> Therefore, through administrative action, legal innovation, and increased support for research and development, China actively has been developing a new technology policy based on the promotion of its own technical standards.<sup>314</sup>

Chinese efforts to develop domestic standards and use them for national advantage span many areas of information technology—its own microprocessor, a successor to DVD, a new digital audio standard, a new Internet Protocol, and a different standard for radio frequency identification tagging.<sup>315</sup> However, so far, China's efforts to achieve technological independence through setting indigenous standards have largely been unsuccessful. The only standard that may emerge as a viable contender in the international market is China's third generation (3G) wireless standard, called TD-SCDMA.<sup>316</sup>

In 2003, China's Ministry of Industry Information announced that all wireless devices sold in China (such as laptops) would have to conform to a domestically developed wireless application protocol interface standard (called WAPI).<sup>317</sup> This technology was only available to Chinese vendors, forcing foreign firms to license the technology and reveal key elements of their technology to the Chinese authorities in order to get it to work properly with their sys-

tems.<sup>318</sup> The mandatory adoption of the Chinese-developed wireless application protocol interface standard provoked strong protests from foreign firms, and the International Standards Organization rejected it in 2006 because it was scarcely innovative. Since then, the Chinese authorities decided to make the protocol optional in China, and although it never gained wide acceptance, it is once again being resubmitted to the International Standards Organization for consideration as a global standard.<sup>319</sup>

Unlike the Chinese-developed wireless application protocol interface standard, its 3G wireless standard has been accepted by the international telecommunications standards body, but even Chinese mobile operators are not particularly eager to adopt it. China's 3G wireless standard has a limited selection of equipment and almost no international support, and there is some concern that it will actually hamper the Chinese industry's progress.<sup>320</sup> While China's 3G wireless standard struggles to gain a foothold in the telecommunications industry, a global race is on to develop the next generation standard, or 4G.<sup>321</sup>

### ***Telecommunications, a Chinese Strategic Industry***

China has one of the world's fastest-growing telecommunications markets and operates the world's largest fixed and wireless telecommunications networks. In 2008, there were nearly 600,000,000 mobile subscribers and 360,000,000 fixed-line customers, providing \$244 billion in revenue to the Chinese telecommunications companies.<sup>322</sup> The development of a telecommunications infrastructure has proceeded unevenly throughout the country. Nearly one-half of China's telecommunications users reside in the provinces on the east coast, while the western provinces are still greatly underserved. This situation contributes to the government's efforts to foster telecommunications development in those areas.<sup>323</sup> In that sense, argues Richard Suttmeier, professor emeritus at the University of Oregon, Chinese government subsidies directed at the expansion of telecommunications services to western China is a national development issue, no different from the U.S. government's efforts to bring electricity and broadband Internet service to rural areas.<sup>324</sup>

The telecommunications industry is considered a strategic sector of the economy, right along with energy, aviation, and steel. Severe restrictions are in place on foreign ownership and market share for foreign providers and producers. The government has control and majority ownership of these telecommunications companies, as envisioned in the 11th Five-Year Plan. In 2008, the government consolidated China's telecommunications industry. Initially, the market included six providers, which were merged by the government into three, each spanning mobile, fixed, and broadband services.<sup>325</sup> One of the reorganization's goals is to create "managed competition," but it will also allow the Chinese government to grant licenses for third generation (3G) mobile services.<sup>326</sup> This restructuring also appears to be an effort by the Chinese government to test and refine the domestic standard so that it may eventually come to dominate the domestic market.

### ***Information Technology***

Choices about technological standards, domestic preferences, and business rules shape the future of China's information technology industry.<sup>327</sup> One factor significantly aiding the emergence of China's telecommunications industry is the success of indigenous telecommunications equipment makers, who constitute an important subset of China's information technology industry and develop technology at far lower costs than foreign competitors. This success, while a substantial achievement, does not reflect significant Chinese innovation, however.<sup>328</sup>

The low value of China's information technology product assembly is a source of intense concern for the government, which views an innovative and successful information technology sector as a key indicator of both national security and economic pride.<sup>329</sup> Thus, a crucial goal for the government is to reduce China's dependence on imported electronics products, such as semiconductor chips and other hardware, and to increase the domestic value added of electronics exports.<sup>330</sup> During the initial reforms of the 1990s, China's prime objective was to create indigenous substitutes for foreign technologies, such as Red Flag Linux to replace the Windows operating system, or the Dragon processor chip to replace Intel, but this effort has been largely unsuccessful. This failure is due to a variety of reasons, including the lack of fully trained and educated professionals and the absence of a culture of collaborative innovation, such as exists in California's Silicon Valley.<sup>331</sup> Nonetheless, China considers development of standards as a key to its efforts to strengthen technological independence. Special research and development programs for standards have been initiated, and direct research and development support and tax and procurement policies are being used to help Chinese enterprises develop indigenous intellectual property and standards.<sup>332</sup>

According to the Organization for Economic Cooperation and Development in Paris, China surpassed Japan, the United States, and the European Union in 2004 to become the biggest exporter of information technology goods.<sup>333</sup> The range of China's information technology manufacturing is broad, with substantial exports of computers, consumer audio-video equipment, telecommunications equipment, and components. This production, however, is mostly focused in last-stage, low-value-added assembly, while the core technologies (and most of the value of the final product) belong to designers in the United States, Europe, and Japan.<sup>334</sup> Because of China's assembly operations, electronic parts and components are the largest categories of China's information technology imports, accounting for 70 percent of all information technology goods imported into China in 2006.<sup>335</sup> There is evidence of movement up the production value ladder, as more value-added processing is transferred to China from Taiwan, although this transfer might have been slowed down by the current global financial crisis. Two of China's more successful information technology companies that are moving up the production value ladder are Huawei and Lenovo.

### **China's Information Technology Giants: Huawei and Lenovo**

The biggest, most influential, and most recognizable of China's domestic telecom equipment manufacturers is Huawei, which claims to be a private firm. It was established in 1988 by several former members of the logistics operation of the People's Liberation Army. Huawei got its start, like many Chinese information technology companies, in commoditizing technologies developed by foreign companies, often reverse-engineering the patented designs first.<sup>336</sup> Cisco sued Huawei for illegally copying its Internet network Operating System software and infringing on numerous Cisco patents in order to develop a lineup of routers and switches. The suit was settled out of court for an undisclosed amount.<sup>337</sup> Today, Huawei's technology is internationally competitive. Huawei now competes with Lucent, Nortel Networks, and Motorola and has established six regional headquarters and 32 subsidiaries in the Middle East, the Asia-Pacific region, South America, and Europe.

Huawei's counterpart in the information technology sector is Lenovo, a successful computer manufacturer and a spin-off from the government's Chinese Academy of Sciences' Institute of Computing Technology, which still retains partial ownership. Lenovo started out primarily as a reseller of foreign computers, gradually moving into assembly. Eventually, Lenovo developed a strong domestic brand and good design, distribution, and supply networks, with some government help.<sup>338</sup> After becoming the top retailer in the Chinese market, in 2005 Lenovo became a more global company by buying IBM's personal computer and laptop division, based in the United States.

### ***Optoelectronics***

Optoelectronics is another example of an advanced technology industry that might have stayed in the United States but is now almost completely relocated overseas. Optoelectronics are used in photovoltaic panels; in new solid-state lighting systems that reduce electricity consumption by a factor of five; in a new generation of television and telecommunication networks; and in sensors that will be deployed to monitor thousands of mechanical and industry systems, roadways, electrical grids, and manufacturing production lines.<sup>339</sup>

China's government has successfully supported the shift of some manufacturing of optoelectronics to China and is now intent on attracting the highest value-added portion of the industry—the research and design work. China's Ministry of Science and Technology has created five national laboratories and is sponsoring academic-industry collaborations around the country in an effort to leapfrog the United States and Europe.<sup>340</sup> China has focused on liquid crystal displays, plasma screens, light-emitting diodes, and solar technology, among others. Other advanced technologies that originally moved from the United States to Taiwan are now relocating across the Strait to the mainland.<sup>341</sup>

China is aided in this effort by one of the peculiarities of optoelectronics itself. Many of the advanced applications of optoelectronics rely on bundling simpler components, or “enabling” technologies—lasers, light-emitting diode lights, infrared sensors, semiconductors, photovoltaic cells, fiber-optic cables, liquid crystal displays, transistors, and so on, with new technologies coming out of the most sophisticated research labs—such as quantum dots, nanowires, nanocrystals, and the like. To do this efficiently and successfully, scientists and engineers may need to be on-site to brainstorm about new applications and solutions and to solve manufacturing problems that may come up in the adaptation phase.<sup>342</sup>

Optoelectronic companies suffered the same fate as most information technology producers, which, after the burst of the 2001–2002 tech bubble, went looking for cheaper production facilities to recover their losses. China, with its government-funded, high-tech parks and low labor costs, presented a very attractive destination. According to Michael Leppy, president of the Optoelectronics Industry Development Association, U.S. companies in search of a low-labor-cost solution relocated to Asia “like a herd mentality.”<sup>343</sup> This, despite the fact that labor accounts for only 10 to 15 percent of component production and most optoelectronics companies would rather stay in the United States. Mr. Leppy polled the members of his association and concluded that “optoelectronics companies want help from U.S. government agencies in designing and innovating the next generation of products.”<sup>344</sup> They understand that they cannot bring back the old manufacturing operations, but with help from government agencies they are confident they can establish new manufacturing platforms for new, next-generation products.”<sup>345</sup>

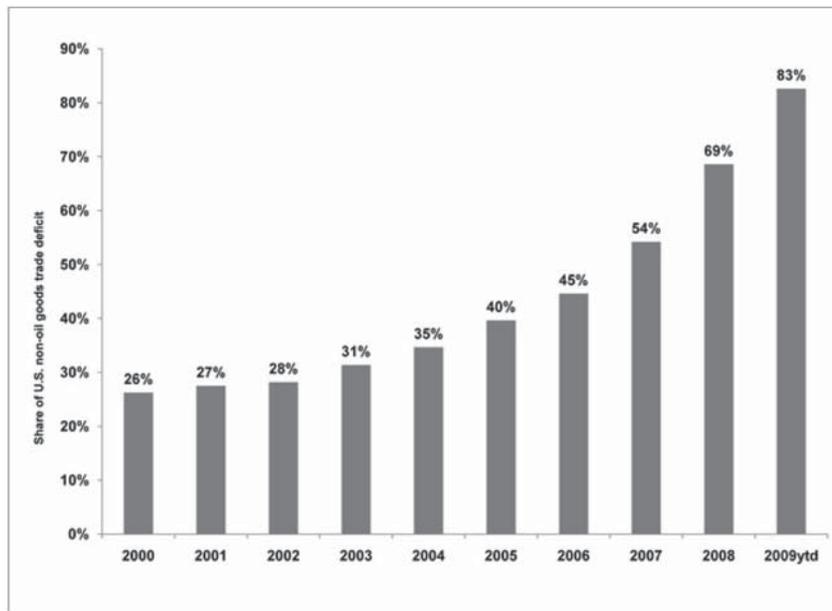
### **Impact of China’s Industrial Policy on the U.S. Economy**

One of the principal strengths of the U.S. economy has always been the ingenuity of its inventors, scientists, and engineers and the vigor of its entrepreneurs. As American ideas and inventions became commonplace around the world, new U.S. innovators came up with new ideas. Rather than depend on protecting national technologies from competition, the United States has instead relied on constant innovation.

China’s industrial policy has had a profound effect on international trade and the U.S. economy. The explosive growth of exports out of China since the Deng Xiaoping reforms and the outsourcing of production by U.S. companies to China have been well documented by this Commission. China’s trade balance with the United States went from a deficit of \$2.7 billion in 1980 to a surplus of \$268 billion in 2008. Since 1980, the United States has run a cumulative trade deficit with China of approximately \$1.9 trillion.<sup>346</sup> The effectiveness of China’s industrial policy in creating an actual advantage for Chinese exporters while protecting China’s import-sensitive industries can be seen, in part, by the growth of China’s exports to the United States over the past 30 years and particularly since 2001. In a study conducted for the Commission by Charles McMillion of MBG Information Services, looking into total bilateral goods trade between the United States and China, U.S. producers enjoyed surpluses with China in only 27 industries

in 2001 while suffering a deficit in 70. By 2008, U.S. surpluses existed in only 20 industries and deficits in 77.\*

**Figure 1: China's Growing Share of the Overall U.S. Trade Deficit 2000 to May 2009 (non-oil goods)**<sup>347</sup>



Source: U.S. International Trade Commission and the Economic Policy Institute.

The impact of trade and competition with China has been devastating to specific industries and local communities throughout the United States. The Commission has held numerous hearings around the country on the impact of trade with China on local economies. For example, Chinese exports of textiles, clothing, and furniture to the United States have severely damaged North Carolina's three signature manufacturing industries. By 2003, China's share of the U.S. market for bedroom furniture was 53 percent, despite the great distance involved and the lack in Asia of the maple and oak that Americans prefer in their furniture. The Chinese advantage, however, was due largely to predatory pricing. (For further discussion of the impact of trade with China on North Carolina, see the Commission's 2007 Report to Congress.)

Another example is the fishing industry, where China has become the world's largest exporter of seafood and the largest volume supplier of seafood to the U.S. market, due to China's adoption of industrial fish farming and Chinese government policies that support the industry and encourage fish exports. China's support of fish farmers and processors, through local and national government aid, low-interest loans, and lax environmental and health controls,

\*For more details, see MBG's study, "China's Soaring Commercial and Financial Power: How it is affecting the US and the World," posted on the Commission's Web site at [http://www.uscc.gov/researchpapers/2009/MBG%20Info%20vs%20US-China%20Trade%20Report%20\\_\\_%20FINAL%20June%202009.pdf](http://www.uscc.gov/researchpapers/2009/MBG%20Info%20vs%20US-China%20Trade%20Report%20__%20FINAL%20June%202009.pdf).

has provided China's industry with considerable cost advantages over the American fishing fleet. (For further discussion of the impact of trade with China on the U.S.'s Gulf Coast, see the Commission's 2008 Report to Congress.)

This year, the Commission traveled to upstate New York and examined the erosion of the advanced technology cluster of Rochester as well as efforts by China to attract both production and research and development facilities of advanced technology companies. (For more information on upstate New York, see chap. 1, sec. 4, of this Report.)

### ***China's High-tech Priorities***

China's industrial policy clearly aims to promote the manufacturing of higher-technology products, replacing lower valued-added and labor-intensive products. China's advanced technology product exports to the United States rose in the past eight years, with exports of communications equipment rising from 10th in 2000 (\$2.9 billion) to third by 2008 (\$26.6 billion) and exports of computer equipment rising from third in 2000 (\$8.2 billion) to the number one export to the United States in 2008 (\$45.8 billion). Following are the major U.S. exports to and imports from China, starting with the year before China's accession to the WTO:

**Figure 2: Major U.S. Exports to China, 2000–2008 (in millions of U.S. \$)**

	<b>2000</b>	<b>2004</b>	<b>2008</b>	<b>2000–2008 % Change</b>
Waste & Scrap	\$744	\$2,508	\$7,562	916%
Semiconductors & Other Electronic Components	\$1,317	\$3,565	\$7,475	467%
Oilseeds & Grains	\$1,048	\$2,829	\$7,316	598%
Aerospace Products & Parts	\$1,770	\$2,111	\$5,470	209%
Resin, Synthetic Rubber, & Artificial & Synthetic Fibers & Filament	\$660	\$1,630	\$3,523	433%
<b>Total U.S. Exports</b>	<b>\$16,253</b>	<b>\$34,721</b>	<b>\$71,457</b>	<b>339%</b>

Source: U.S. International Trade Commission, *Interactive Tariff and Trade DataWeb* (Washington, DC).

**Figure 3: Major U.S. Imports from China, 2000–2008 (in millions of U.S. \$)**

	<b>2000</b>	<b>2004</b>	<b>2008</b>	<b>2000–2008 % Change</b>
Computer Equipment	\$8,256	\$29,486	\$45,820	454%
Miscellaneous Manufacturing Commodities	\$16,296	\$23,712	\$35,834	119%
Communications Equipment	\$2,957	\$9,015	\$26,618	800%
Apparel	\$6,972	\$10,530	\$22,582	223%
Audio & Video Equipment	\$6,264	\$12,421	\$19,715	214%
<b>Total U.S. Imports</b>	<b>\$100,062</b>	<b>\$196,698</b>	<b>\$337,789</b>	<b>237%</b>

Source: U.S. International Trade Commission, *Interactive Tariff and Trade DataWeb* (Washington, DC).

One measure of China's successful industrial policy and economic modernization can be demonstrated by China's trade with the United States in advanced technology products.<sup>348</sup> Throughout the 1980s and 1990s, it was hoped that a national surplus in advanced technology products would eventually pay for a significant share of the U.S.'s net imports of oil, apparel, autos, and other products of mature manufacturing industries.<sup>349</sup> However, according to Dr. McMillion, the United States began suffering deficits in advanced technology products trade with China in 1995 and with the rest of the world in 2002. Currently, China accounts for 28 percent of the U.S.'s advanced technology products imports and only 7 percent of its exports.<sup>350</sup> Some of the reasons for the narrowing of the U.S.'s historic lead in high-technology products are attributable to economic factors—lower wage costs overseas, faster and more efficient global transportation, and the spread of higher education. But some of America's edge has been lost as a result of careful economic planning by other governments, in particular the Chinese government.

In 2008, China's exports comprised 36.5 percent of its gross domestic product (GDP), while only 13 percent of the U.S.'s GDP came from exports.<sup>351</sup> Export-led growth policies pursued by China and other industrializing nations have inevitably led to excess capacity in many products, notably steel and automobiles, which has contributed to declining manufacturing jobs and production in many market-oriented countries, including the United States. Problems arise for China's trading partners as China exports its excess capacity at prices that the rest of the world cannot match. For example, in 2008, China accounted for 38 percent of the world's crude steel production (about 500 million tons), compared to only 7 percent for the United States, and China's excess capacity of steel is greater than Japan's entire yearly output.<sup>352</sup> Such exports also exacerbate the global economic downturn, as China essentially exports unemployment to countries unable or unwilling to compete on the basis of subsidies provided to favored industries.

"This imbalance underlies the current economic crisis that we are suffering," said Mr. Prestowitz at the Commission's March hearing on China's industrial policy.<sup>353</sup> Nevertheless, China sees the global financial crisis as an affirmation that "China holds the philosophical high ground, reinforcing its long-held position at home and abroad that unbridled capitalism and a weak state are a sure recipe for serious sociopolitical and economic problems," according to Dr. Simon, who testified at the March hearing.<sup>354</sup> China is now authorizing even more subsidies, increasing the rebating of its VAT, erecting new barriers to trade, and implementing a "buy Chinese" policy. (For more details on China's response to the global financial crisis, see chap. 1, sec. 2, of this Report.)

## Conclusions

- China's economic reforms were not based on traditional free market principles. China's policy during the past 30 years has instead relied on a government-directed industrial policy to promote certain segments of the economy over others and to promote export-led growth.

- China's more recent Five-Year Plans have shifted the emphasis away from labor-intensive operations and toward increasing the production of high-technology goods. China has matured as a manufacturer and assembler of advanced technology products and as a consumer of electronics and information technology products. The low cost of labor along with government investment in high-tech industrial parks—and a variety of direct and indirect subsidies—created an attractive environment for foreign companies to invest in China, particularly after China joined the WTO in 2001.
- China provides subsidized land, energy, and water to many foreign manufacturers who relocate their operations in China. By providing these benefits, along with a cheap labor force without the ability to bargain collectively or join independent unions, the Chinese government has created a low-cost haven for foreign manufacturers. China's subsidies have grown over the years and now include tax incentives and preferential loans, which further reduce the cost of investing in China.
- China has consistently used a 17 percent value added tax (VAT) as an instrument of industrial policy. China selectively rebates the VAT when a domestic manufacturer exports but imposes it on imports. The United States, on the other hand, does not use the VAT and is not allowed by WTO rules to rebate income taxes on exports. China's VAT policy therefore places U.S. exports at a distinct disadvantage.
- The U.S. government has filed a variety of WTO cases against China's barriers to trade. These WTO cases, while important, are very industry specific, time consuming, and fail to have an impact on the trade-distorting aspects of China's industrial policy or to deal with the underlying causes of the U.S.-China trade deficit. Tackling the systemic trade imbalances between China and the United States through WTO mechanisms will not address broader issues such as environmental pollution or workers' rights abuses. The U.S. government will have to find alternative venues in which to address such matters.