Elements of a Sustainable Trade Strategy for China:

Policy Makers' Summary

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Introduction

Over the last 30 years, Chinese policy makers have been burdened with the proverbial curse: to live in interesting times. When China began introducing its trade reform strategy in the 1970s, it ranked 32nd among nations in global trade. Today it is the world's largest exporter, with total value of trade having

increased over a hundred-fold since 1978—an annual average growth rate of 16.3 per cent. The open-door policy that has underlain much of this growth also has involved a torrent of foreign direct and portfolio investment, which rose from US\$1.9 billion in 1986 to just under US\$100 billion in 2005.

China's impressive export engine, driven by a strategy of actively absorbing foreign direct investment and encouraging the development of foreign trade, has played a key role in the unprecedented growth that lifted hundreds of millions of people out of poverty. China's exports of goods and services rose from just over 10 per cent of GDP in 1986 to over 40 per cent today.

As the volume of China's trade has expanded, its structure has changed dramatically as well. In 1978 over half of China's exports were primary commodities—a figure that has now fallen to 5 per cent. Exports of manufactured goods, just 46 per cent of the total in 1978, have more than doubled to 95 per cent, with over 30 per cent of that being new and high-tech products.

But the strategies that worked so well to get China where it is today may not be the strategies that will take China to a sustainable and prosperous future. Increasingly, China struggles with challenges engendered by a model of growth that has led to tensions and imbalances: between economic and social development, between urban and rural development, and between the economy and the environment, among others. These challenges can be framed as falling within the themes of the three pillars of sustainable development: economic, environmental and social.

From the **economic** perspective, although the value of China's exports is high and the percentage of new and high-tech products significant, the actual value added is low; China is still overwhelmingly a manufacturer for brands owned and marketed by others. Over 40 per cent of China's export stream is processing trade, which involves assembly of imported manufactured and high-tech components. In this sector, value added is relatively low (as low as 10 per cent in some cases) and little rent is captured. In the end, the major value added portions of the global value chain go to brand owners, innovators and merchandisers, not to assemblers of products.

Second, as the structure of China's exports changes, its exporters are having increasing difficulty meeting foreign product and process standards. China's industrialized target markets (almost 50 per cent of exports) are increasingly upgrading the standards that

goods must meet, whether pertaining to energy efficiency, sanitary and phytosanitary requirements, disposal requirements or bans on certain substances. These sorts of requirements tend to work against developing country exporters, who have less technical capacity; in 2005 they led to estimated losses for China of 9 per cent of total export value. And the celebrated few cases of non-compliance, especially with health and safety standards, work to tarnish *Brand China* in the minds of consumers. The "brand" image of China is critically important not only to China's exporters, but also to China's outward investors, whose forays into foreign





acquisitions are often thwarted by anti-Chinese sentiment among policy makers and the public.

From the **social** perspective, China's failure to move up the global value chain means that trade cannot fulfill its potential as an engine of development and poverty alleviation. Neither can China's trade fulfill its potential to provide the quantity or quality of jobs that China must create to employ its increasing, and increasingly educated, workforce. The Chinese economy faces the difficult challenge of creating some 13 million new urban jobs annually to accommodate laid-off workers, university graduates, demobilized servicemen and migrant workers from rural areas.

Quality of jobs is also important from a social perspective. In considering how trade can contribute to that objective, one area that stands out is trade in services, where some argue that jobs are better than the average in manufacturing. Unfortunately, China has a chronic balance of payments deficit in services, meaning a missed opportunity for social welfare improvement.

From the **environmental** perspective, China's export stream embodies significant unpaid environmental costs. That is, production for export in China entails domestic and global environmental damage that is not paid for by the foreign consumers of the final goods. So, for example, in 2004 China's exports were responsible for an estimated 23 per cent of its carbon dioxide emissions. Despite impressive government efforts to reduce the environmental impact of manufacturing and processing trade in particular, the positive effects of technological progress and tougher standards have been overwhelmed by the sheer scale of production. In addition to pollution related to energy production, there are concerns about agricultural and manufacturing water effluent and about the generation of industrial solid waste. Industrial air pollution in the form of toxics and volatile organic compounds is also an issue. These concerns are not just environmental, but are also social, since these forms of pollution degrade people's health and well-being.

The environmental challenge is also economic. China's extensive growth model and lack of technological capacity have led to the inefficient use of scarce environmental resources. Compared to their competitors in OECD (Organisation for Economic Co-operation and Development) countries, average energy consumption per unit of output in key Chinese sectors is significantly higher. Consumption of coal for thermal power generation was 40 per cent higher in 2007, and the figures for steel, cement and pulp and paper were 21.4 per



cent, 45.3 per cent and 120 per cent higher, respectively. Although the efficiency of use of natural resources and energy has rapidly increased under the efforts of the Chinese government, there is still a big gap with the advanced economies, which in the end means more pollution, more waste and higher costs of production.

All of these challenges take place against the backdrop of global changes that add to the pressures on China's past model of growth. Multilateralism is struggling, whether we look at the impasse in the current global trade talks or at the beleaguered global climate negotiations. This is not good news for a country that relies heavily on an open, non-discriminatory global trading system. Prices of basic commodities such as metals,

minerals, oil and agricultural goods fell from their dizzying heights in 2008 but are now back on the rise again. Aside from the damage of price volatility, which is a basic feature of these markets, this upward trend leads to concerns about a model that relies heavily on imported inputs. High prices for oil, in particular, are troubling because they negatively affect the viability of traded goods in general. In 2008 when oil prices reached US\$120/barrel, it was calculated that inflated transport costs were the equivalent of a 9 per cent tariff on all goods shipped from China to North America. And on a number of fronts, from biodiversity to climate change to ecosystem services, we are seeing increasing pressure on, and concern about, the natural environment. Worsening trends in this area will mean that consumers will increasingly translate their concerns into their shopping habits. This puts increasing pressure on China's exporters to meet a plethora of ever-tightening foreign environmental standards, both public and private.

A Sustainable Trade Strategy for China

The pressures and tensions of China's current development path, and the various global drivers that influence China's future trajectory, strongly imply that the successful policies of the past are not the successful policies of a sustainable, prosperous future. In the area of trade policy what is needed is a *sustainable trade strategy*—a thorough revisiting of current policy in all its facets to better understand how trade and investment can contribute to economic, social and environmental well-being in China. Ultimately such a strategy addresses the critical hurdles China needs to overcome in advancing to its next stage of maturity. Done successfully, such a pioneering strategy will help China firmly establish hallmark leadership throughout the twenty-first century.

A comprehensive sustainable trade strategy must look at sustainable trade in goods and services (both imports and exports), and sustainable flows of investment, both inward and outward. It must help to ensure that all of these flows, and their dynamic rippling impacts on other aspects of China's economy and society, contribute to China's advancement. This involves considering trade policy in its broadest terms, including such areas as upgrading of the manufacturing sector, engaging on mandatory and voluntary standards in China's export markets, exploring the impacts of China's services trade and revisiting China's strategies for international trade and trade-related cooperation agreements. It involves close working partnership with China's enterprises in ensuring that they can continue to meet and exceed international expectations for leadership and to secure a welcoming environment for their outward investment. It will involve clear understanding of the links between trade and related international developments such as climate change and other global challenges.

A sustainable trade strategy for China is grounded in a number of existing Chinese policy priorities. The Party has called for a "scientific concept of development" to guide future growth with the principles of people first, innovation, balanced and sustainable development and social harmony, among others. The thrust is a transformation from an *extensive* model of development to an *intensive* model. Trade policy, for its part, needs to shift from a narrow export orientation to a strategy of sustainability, focused on the economic, social and environmental pillars of sustainable development. Echoing the same policy direction, China's 11th Five-Year plan highlights the need to pursue a mutually beneficial opening-up strategy that moves away from a focus on quantity to harnessing globalization to improve the *quality* of China's growth. It also highlights the need to build a resource-efficient and environmentally friendly society, underscoring the links between the environment and a sustainable national economic system.

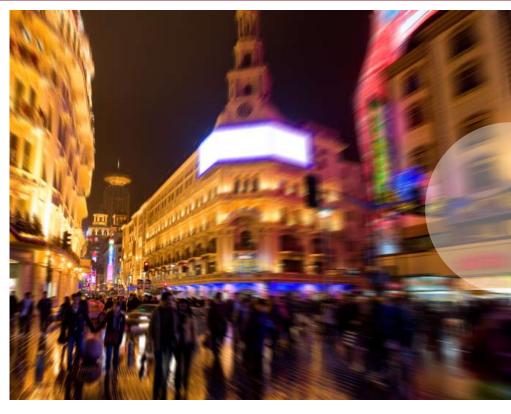
The purpose of the project that gave rise to this policy brief, which is a summary of in-depth research assembled in book form, was to explore what a sustainable trade strategy for China would look like. What



does it mean, for example, for the strategy of moving up the value chain, for the services trade, for an approach to product and process standards? The six topics discussed below are not an exhaustive picture of a sustainable trade strategy for China, but they give particularly helpful substance to the idea by examining key areas of concern and they deliver a number of specific recommendations, summarized below.

Upgrading China's Manufacturing Sector

Upgrading of China's manufacturing sector has been taking place for decades. From its base in the early 1990s of heavy industrialization based on raw materials, China took advantage of the global movement to break up production into a series of value added links that could be undertaken in different locations worldwide, first taking up links related to light manufacturing, such as textiles and apparel. Since the mid-1990s China has come to rely heavily on manufacturing that is more information-intensive, such as electronics and communication goods. The majority of that is processing trade, as described above. Since China's accession to the World Trade Organization (WTO), multinationals around the world have expanded their operational objectives in China and integrated their business operations there by



introducing into China upstream research and development (R&D), design and manufacturing of core components and intermediate products, and downstream sales and logistics as well.

Trade has played a key role in that process—since 1990 processing trade has constituted more than half of China's exports. Over 70 per cent of China's foreign direct investment (FDI) (China is the world's largest recipient country) goes to processing trade. That investment has been attracted by China's abundant, high-quality and low-price labour resources, a potentially huge domestic market, and preferential policies for foreign capital and foreign trade, among other things.

The advantages of China's current placement on the global value chain include the ability to learn by exposure to foreign practices and technologies, and the massive employment benefits that accrue from China's labourintensive export production machine. The disadvantages include increasing trade friction as the world's lowcost supplier in an increasingly competitive global market, a low share of the value added in the value chain, and the significant environmental damage that goes along with energy- and resource-intensive processing and manufacturing. The imperative to accelerate the upgrading of China's manufacturing sector is driven by a number of factors:

- Increasing competition from other low-cost producers in East Asia and elsewhere at the low end of the value chain. China's labour cost advantage is essentially gone, and land is becoming expensive as well;
- Increasing evidence of significant environmental costs of high-resource and energy-intensive activities;
- The desire to wring a greater share of the rents from the global value chain and to create better paying jobs for Chinese workers.

But upgrading is essentially a process that happens at the firm level and is highly dependent on the capacity of employees and managers to spot and take advantage of new opportunities as demand and technology change. As such, although there are important ways in which governments can support that capacity, they are indirect and limited. They include:

- **Go all out to promote technical innovation:** Promote more R&D through financial support, joint efforts and a focus on training and education; reform state-owned enterprises and monopoly actors to make them more responsive to the imperatives of the market; strengthen protection of intellectual property to encourage more investment in, and transfer of, innovation.
- **Promote clean industrial upgrading:** The upgrading that takes place should be set in a context of regulatory incentives that discourages intensive pollution, resource use and energy consumption. Not only does this strategy pay dividends in terms of long-term competitiveness through efficiency, but it also serves public health, energy security and resource security objectives.
- Promote localization of processing trade: Pursue greater backward and forward linkages from
 processing trade by removing barriers for private sector pursuit of investment in those areas;
 support domestic firms in their bids to integrate into the global value chain; focus on education
 and training to supply domestic firms with capable human resources.
- Steadily promote overseas investment: Overseas investment is key for domestic firms looking to obtain advanced technologies, to secure overseas resources, and to build up international brands and marketing networks, among other things. Some of the discussion below thinks about how the Chinese government could facilitate this goal, but at a minimum it involves cultivating a positive Brand China.

In the end, accelerating the upgrading process in China's manufacturing sector is an urgent priority from the economic, social and environmental perspectives and should be seen as a central part of any sustainable trade strategy.

The Growth of China's Service Sector and Associated Trade

Services are distinguished from other economic activities, specifically, agricultural production and resource extraction (the primary sector) and the manufacture of goods and production of energy (the industrial or secondary sector). Services are often thought of as intangible or, as one observer put it, something that you can buy or sell, but which you cannot drop on your foot.



The services sector has a number of important links to the economic, social and environmental pillars of a sustainable trade strategy. For one thing, services are increasingly recognized as important determinants of productivity in the secondary or manufacturing sector, and are therefore important to the prospects for upgrading that are discussed in the previous section. More elaborate financial services can reduce transaction costs and risk and better allocate resources across competing activities. Low cost and reliable telecommunications services can help diffuse knowledge and are often a prerequisite for firm membership in global supply chains. Transportation, retail and distribution services all affect the costs of shipping and supplying goods, including exported goods.

For another thing, services are directly important to environmental quality. The environmental pressures of economic growth can be avoided and managed by a variety of environmental services including waste and sewage treatment, corporate environmental management, pollution remediation, remote sensing and monitoring services, and so forth. A number of management and technology-related services aimed at reducing energy and resource inputs have environmental benefits as well, reducing resource use and pollution.

The export of services can also contribute to economic development. China's commercial services exports in 2008 were US\$146 billion (ranked sixth in the world), or 3.4 per cent of GDP.

Finally, the service sector is also an important source of employment. Since the mid-1990s, the number of people employed in China's tertiary industry has exceeded the number in the manufacturing industry. It is sometimes suggested that service sector jobs are higher quality than average jobs in primary and secondary sectors. That is probably too much of a generalization, but certainly the development of a specialized service sector can generate high quality employment.

China's service sector has a lower share of total GDP than other middle income countries, but has been growing at an impressive rate. From 1978 to 2007 the annual average growth rate of the tertiary sector's value added reached 10.8 per cent—up to six percentage points higher than that of Chinese agriculture and manufacturing. Its proportion of GDP rose from just over 20 per cent to around 40 per cent. China's services trade has been growing at an increasing rate since 2000, at rates that are higher than the growth of the services sector as a whole, but it has also recorded a widening deficit.

China's overall competitiveness in the service sector is low, with prices higher and quality lower than international norms. The exceptions to this rule are the tourism and construction sectors, but revealed comparative advantage in both is falling. Transportation and computer and information-related services are increasingly competitive, but still lag behind global competitors. This poses a challenge, since high quality business and environmental services are critically important to the upgrading of the manufacturing sector, to domestic environmental quality and to China's ability to wring economic and social benefits from the export of services.

One remedy for lack of international competitiveness is opening up to international competition. In the service sector, trade is governed by China's commitments under the WTO's General Agreement on Trade in Services, as well as by an increasingly more significant set of commitments under regional and bilateral trade agreements. Although China has opened up a number of service sectors to unrestricted foreign investment, many barriers still remain in place to shelter domestic service providers.

The Chinese government has taken steps to help ensure that services trade is supportive of sustainable development, including removing fiscal and other support for services in sectors with high energy and resource inputs. It also promotes investment in various types of business and environmental services. These efforts should be accelerated and other policy options considered:



- Removal of controls on urban migration would give China more large cities capable of developing specialized service providers; encouraging the development of environmental services could minimize the environmental stresses associated with urbanization.
- Commitments to liberalize strategic sectors, opening up to foreign investment, could foster accelerated upgrading of the manufacturing sector (business services) and help China deal more effectively with environmental pressures (environmental services). The down side would be a widening deficit in services trade, but in and of itself such a gap is arguably less important than increasing the quality and lowering the costs of services in sectors that are key to China's sustainable development.

Standards for Sustainable Development

Despite the impressive growth China has shown in its economy and in international trade, its exporters struggle to meet a growing range of environmental, social, health, safety and quality standards in their main export markets. These include sanitary or phytosanitary standards, other mandatory technical regulations, and private buyer's standards that are conditions of sale.

Fostering the ability of exporters to meet such demanding foreign standards is key to China's export success in the large developed country markets and will serve as a prerequisite to building up the important *Brand China*. The challenge becomes more critical as China's exporters move up the value chain "closer" to the final consumer. Meeting environmental and social standards will also have the incidental benefits of reducing pollution, improving public health and well-being, extending natural resource sustainability and increasing production efficiencies in China's export sector.

Whether propounded by governments as mandatory technical regulations or by the private sector, the number and influence of such standards are steadily increasing. In the last decade a slew of critically important new regulations have come into play in China's key export markets, including:

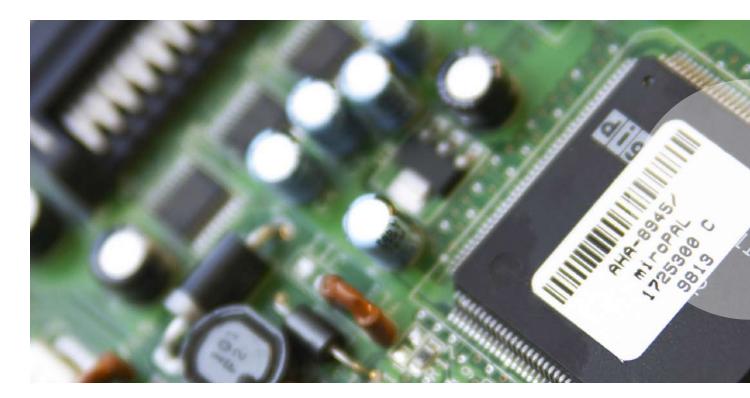
• European Union Directives on *Restrictions on Hazardous Substances* (ROHS), on *Registration, Evaluation and Authorization of Chemicals* (REACH) and on *Waste Electrical and Electronic Equipment* (WEEE);

- Japan's omnibus Food Safety Law;
- Ongoing new regulations in the United States under the framework of the Toxic Substances Control Act and the Federal Insecticide, Fungicide and Rodenticide Act.

These join existing standards such as GlobalGAP—the increasingly important environmental and social standard for agri-food exports—and other buyers' standards, such as the quasi-obligatory HACCP sanitary and phytosanitary requirements, to create a growing web of requirements for China's exporters that are threshold conditions for entry into key markets.

While some of China's exporters are rising to these challenges, many others struggle. In 2006, foreign environmental standards and health and safety standards resulted in US\$36 billion direct damage (costs of recall and rectification), or 3.7 per cent of the total value of merchandise exports. This does not count the much higher impacts of standards on compliance-related production costs. Most of these were in China's three major markets—the United States, the European Union and Japan—and related to exports of mechanical and electrical products, textiles and agricultural goods. Japan reported in 2007 that roughly a third of the 1,515 food samples rejected for import came from China. While only a miniscule percentage of China's exports are problematic, it only takes occasional high-profile cases of non-compliance to damage *Brand China*, particularly where the exports in question are final consumer goods such as food and toys. And damage to the brand goes beyond the export of goods; China's reputation is important in its quest for strategic outward investment as well.

There are a number of ways that the Chinese government can work to ensure that standards become a positive element of China's sustainable trade strategy:



- Improve China's domestic standard regime. By narrowing the gap between domestic standards and international standards (especially in the areas of health, safety and environmental protection) and focusing on enforcement and compliance, China can help equip its exporters to meet stringent foreign requirements and weed out "rogue" producers that damage the national reputation. China should also continue to play an active role in the elaboration and monitoring of new international standards.
- Enhance exporters' abilities to meet foreign standards. Exporters need better and timelier information on foreign standards and on the types of technology and systems that they demand. As well, the government should invest heavily in accredited domestic facilities for testing and verifying compliance with foreign standards.
- Strengthen interactions with private sector exporters. Meeting the challenge is not something
 that government alone can do; it will involve strengthened relations between government,
 industry associations and individual exporters. The Chinese standards association needs to fully
 understand the needs of exporting firms, and the firms in turn need to know about developments
 on standards at the domestic and international levels and how they can meet new and existing
 requirements.

Advancing the Sustainability Practices of China's Transnational Corporations

For China to maintain its fast pace of growth, it needs to forge international competitiveness strategies underpinned by increased resource efficiency and harmonious development. One important aspect of that challenge is the visible conduct of China's transnational corporations (TNCs) abroad, where *Brand China* can be either a facilitator of competitiveness or a negative and threatening force.

Credible and demonstrable sustainable development practices among China's TNCs are increasingly a prerequisite for China's transition to a role as a major economic and political global player. Failure implies damage beyond simply individual business losses, but also in terms of *Brand China* and in the area of expanded trade and investment more broadly. A number of high-profile cases over the last five years—in mining and minerals, consumer products and other sectors—have demonstrated that Chinese outward investment is subject to treatment that depends heavily on the politics of perception.

A major first hurdle for exporters and TNCs is to demonstrate compliance with the sorts of technical regulations discussed in the previous section. But compliance with international and national law is not enough. Beyond these traditional legal frameworks is a more complex and dynamic category of rules evolved on the basis of norms, expectations and interests articulated by a wide variety of global citizens such as consumers, employees, investors and active participants in more formal political processes. This soft law universe is unfamiliar and uncomfortable territory for many Chinese TNCs, as they are unused to civil society engagement and unsure about the evolving role of business in global society. China placed 87th in the most recent Responsible Competitiveness Index—significantly lower than other BRICS (Brazil, Russia, India, China and South Africa) countries—largely due to the failure of Chinese TNCs to deal well with civil society in target markets and host countries. Many Chinese firms distrust soft law instruments such as voluntary standards and adopt a strategy of avoidance.

The collaborative standards initiatives that are used by other TNCs, to guide them in following and attesting to

sustainable development practices, are governed by non-state actors and public institutions acting in their nonstatutory roles. They seek to create *de facto* regulatory enforcement through a blend of citizen-based campaigning, capital-market risk-based responses, peer-to-peer business pressure and, in some instances, the threat of statutory regulation in key markets. These initiatives have developed in an *ad hoc* manner and are fragmented in scope, coverage and quality. Nevertheless they are, taken together, an increasingly influential global phenomenon covering hundreds of different standards and principles. They include such initiatives as:

- The International Finance Corporation's Equator Principles on project finance
- The Forest Stewardship Council's forestry standards
- SA 8000 standards on labour practices
- The Extractive Industries Transparency Initiative
- ISO 26000 standard on corporate social responsibility
- Oeko-Tex Standard 100—a voluntary private standard on environment and labour in the textile sector

Clearly, adoption of such standards is a choice that must depend on the calculus of individual firms, their markets, their core strengths and their long-term strategic plans, among other things. Alternatives to simple compliance include opting out to create more appropriate standards (traditionally a tough sell to cynical consumers) and engaging actively in the process of standard-setting to transform existing standards. This latter course could not only help Chinese outward investors better understand the unfamiliar concepts of corporate social responsibility and civil society engagement, but could also significantly influence the next generation of sustainability standards in global markets.

In the end, sustainability standards are an important means of offsetting competitive disadvantages or of creating competitive advantages when businesses and nations such as China choose to develop more sustainably. There are a number of policies the Chinese government might take to encourage and enable its TNCs to approach this challenge capably and in a way that reflects the best interests of the Chinese export sector as part of a sustainable trade strategy:

- **Policies to create and enable incentives:** Adherence to specific standards or codes could be a condition for various types of government support, such as preferential tax treatment, access to international investment fund support, export credit or loan guarantees, or access to foreign exchange reserves.
- Knowledge development: The Chinese government could establish an institute to promote international investment (along the lines of the Japan External Trade Organization), with a strong mandate for building capacity on sustainability. It could also accelerate and upgrade training of managers, including in the area of international sustainability expectations, and add a sustainability training component for diplomatic postings that support overseas investment.
- Aligning the brand: Chinese foreign assistance aimed at fostering international investment will be
 most effective if it is aligned, and seen to be aligned, with the host country's sustainable development
 priorities. Diplomatic capacity to address sustainability questions will be increasingly important. And
 China might gain advantages by pursuing links to its sustainable practices in regional and bilateral trade
 agreements.

Sustainable trade and international investment should be treated as an integral element of the Chinese government and indeed, any government—strategy for advancing its nation's development. The right course of action is not to have a sustainability strategy, but a sustainability perspective embedded at the heart of a strategy for trade and investment.



China's Commercial Policies

The preceding sections discuss in some detail how and why China might pursue a sustainable trade strategy. In that context it is clearly important to think about China's commercial policies, whether they be couched in the form of multilateral trade policy, bilateral and regional trade policy, unilateral trade policies, regional cooperation or other trade-related soft law instruments. How can China use these sorts of agreements and policies to promote its sustainable trade strategy, and what implications does that strategy have for the conduct of China's commercial policy?

In thinking about these questions it is important to bear in mind the history and current practice of China's commercial policy strategy. Since China's accession to the WTO (and, arguably, even before that) there has been emphasis on significant liberalization, involving tariff lowering and fundamental regulatory reform. There has also been emphasis, as expressed in the subsequent five-year plans, on multilateral and regional cooperation and on shifting the emphasis from unbridled growth to a more nuanced *scientific concept of development*.

China has also in the last 15 years moved rapidly to engage at the regional and bilateral level, signing a significant number of free trade and cooperation agreements, notably including the establishment of the China-ASEAN (Association of Southeast Asian Nations) Free Trade area. Among the key objectives for such negotiations are harmonious regional economic integration and shared regional prosperity, along with the stability they bring. These agreements are noteworthy because they provide space in which to

attempt innovative trade policy that might be more challenging at the multilateral level.

In part as a result of China's enormous success in export-led growth, it has been subject, more than any other country, to a growing number of trade disputes and frictions. From 1995 to 2008 one in seven anti-dumping cases worldwide involved China. Many of the measures to which China is subject push the boundaries of what is allowed under WTO rules, but there seems to be little scope in the medium term for improving those rules, given the lack of progress on the Doha Round negotiations.

Given the objectives discussed in previous sections and China's current context, what sorts of commercial policies might be supportive of a sustainable trade strategy for China? There are several possibilities.



- In line with the need to upgrade China's manufacturing sector, its commercial policy objectives should be broader than market access, including protection of Chinese intellectual property abroad and protection for Chinese outward investment. They should also focus on protection from unfair implementation of the standards and technical barriers that typically face high-end products. The policy options here include negotiated disciplines on regulatory policy. Such an approach is a double-edged sword, however, and would apply equally to China's domestic practice in respect of its trading partners. Soft law approaches, for example within the ASEAN region, might hold promise as alternatives that could be tailored to China's interests. In the longer term, successful regional efforts may provide a model for similar efforts at the multilateral level.
- It was argued in a previous section that China could benefit from improved quality of services, especially business and environmental services that can facilitate the process of upgrading and help manage the environmental implications of China's future growth. Both sorts of benefits might accrue from strategic opening up of China's service sectors to investment from foreign service providers. This would have to be done with wider policy objectives in mind, which may include a desire to shelter certain sectors.
- Whether to open up services trade in the context of free trade agreements or multilaterally is
 probably a moot question; by simply establishing a commercial presence in a country that has rights
 of establishment in China, third-country service providers can arguably avail themselves of those
 same rights. At the multilateral level, even while the Doha deal is pending, China should consider
 unilaterally offering services liberalization while retaining the negotiating chip of not locking in that
 reform until a sufficiently attractive multilateral trade deal is obtainable.
- Commercial policy might also further the goal of expanding China's export of services through
 outsourcing and temporary movement of persons. A number of countries tightened restrictions
 on such trade in the recent economic downturn, and there is scope for China and other interested
 countries to jointly press for legal obligations in this area.
- To address the rising tide of trade complaints and frictions involving China, the government should promote regular bilateral dialogues to address and defuse tensions before they become formal disputes.
- China should look ahead to the post-Doha WTO to think about how subsequent multilateral negotiations could be used as a vehicle to promote its interests in a sustainable trade strategy. It may find a number of other like-minded developing countries with the same interests.

China's Electrical Power Sector

The electricity sector in China has a number of important linkages to sustainability in general, and in particular to a sustainable trade strategy. It is, in the first place, critically important because of its environmental impacts. China's generation of electricity is a significant contributor to pollution and environmental degradation, emitting 15.4 million tonnes of sulphur dioxide (one of the principal causes of acid rain) and 2.8 billion tonnes of carbon dioxide (almost half of China's total carbon dioxide emissions) in 2007. It has been estimated that fully half of China's increase in carbon dioxide emissions between 2002

and 2005 was tied to its exports, and most of that derived from the power used to produce those goods.

Electricity also underpins China's industrial sector; industrial users in 2006 accounted for 74 per cent of total electricity consumption. As such, any policies that can increase the sustainability or security of supply, or the efficiency of use of electricity, will also improve the competitiveness of China's manufacturers and exporters. The converse, however, is not always true; evidence from international experience seems to show that environmental policies that increase the cost of electricity may result in increased competitiveness as firms look for cost savings in product and process innovations. And to the extent that electricity sector policies result in low carbon exports, they may act as shields against possible future border measures that levy charges on carbon embodied in traded goods.

The electricity sector, then, is an interesting case study of a policy arena that is relevant to a sustainable trade strategy and yet lies far beyond the realm of trade policy. There are many such examples, but this particular sector is clearly one of the most important.

China relied on thermal power (coal) for 78 per cent of its installed capacity for electricity in 2007 (twice global average figures), with hydroelectric at just over 20 per cent and nuclear at 1.2 per cent. Wind power is negligible, but is growing quickly; installed capacity grew over 94 per cent in 2007. Over-reliance on coal is a problem, and not just because of its environmental impacts—it also puts too much faith in domestic supply chains that are stretched to their limits.

China's total installed capacity has increased over ten times since the reform of the power sector began in 1980. And strong growth will continue; while China's installed capacity is second only to the US, its *per capita* installed capacity is still low by international standards, with Korea 2.4 times as high, Japan four times as high and the United States almost seven times as high. These shortages are exacerbated by inefficient use; it was noted above that China's industrial producers are significantly more energy-intensive than their foreign counterparts, even those in other middle-income countries. China's production and transmission of electricity is relatively inefficient as well; if it were using high-standard generating technology China would save about 100 million tonnes of standard coal per year. Most of the inefficiency lies in old generating plants of less

than 100 MW—plants that made up almost 20 per cent of capacity in 2007.

China's power producers are covered by an overlapping web of at least fourteen environment-related laws and jurisdiction for pollution control at both the federal and provincial levels. The power sector is regulated both as a major polluter and as a distinct sector. The general approach is the "polluter pays" principle, with fees levied in accordance with pollution emitted. The 11th Five-Year plan set ambitious goals for the power sector, mandating that between 2005 and 2010 energy use per unit of GDP would drop by 20 per cent and renewables would constitute 10 per cent of the energy mix. As part of fulfilling these goals the State Council proposed closing down 50 GW of inefficient generators in those years—a significant and unprecedented policy of industrial restructuring. Strong incentives were put in place at the local government level to help ensure the goals were met.



China has also pursued science and technology policies and industrial policies aimed at vigorously boosting the development of renewable energy, including demonstration projects and R&D support for new clean energy technologies. All of this has helped China go far in advancing toward a regime of electrical power generation and distribution that is more efficient and lower in carbon emissions. But by international standards it still has far to go. Several policy options are worth considering as valuable for both the sector itself and in terms of their contributions to a sustainable trade strategy for China:

- **Continue to learn from the experience of others.** Countries around the world are pursuing similar goals and they provide an excellent laboratory for what does and does not work. China should continue to learn from these experiences and adapt them to the unique realities of the Chinese context.
- Conduct research to identify and quantify costs and benefits. While it is clear that significant co-benefits might result from a successful strategy of minimizing pollution and pursuing energy efficiency, it is not clear how these benefits measure up to the potential costs of such actions. Do the health benefits of a feed-in tariff, for example, compare favourably to the costs of implementing the measure?
- Use a mix of tools. Traditionally China resorted to command-and-control-type regulatory approaches, but in recent years it has begun to experiment with a mix of tools that includes more economic instruments such as taxes, subsidies and market-based measures, as well as other policy instruments. This mixed approach, taking the best of various types of tools to deal with China's challenges, is ideal and should be continued.
- **Price carbon.** One of the key tools that China should consider is a regime to price carbon, such as a cap-and-trade scheme or a carbon tax. Coupled with other regulatory instruments, these have enormous potential to drive innovation and deliver a wide variety of economic and social co-benefits.

Conclusion

This collection of analyses does not aspire to be a road map that determines China's itinerary as it sets sail from the harbour of traditional trade policy toward the final destination of sustainable trade. It is, instead, a first review of the key milestones on that journey—an assessment of the areas of trade policy that must be studied and understood. How they are managed will determine whether, in the end, China shifts from a traditional trader, generating serious environmental and social dislocation in its pursuit of wealth and favourable economic statistics, to instead be a world leader in the search for forms of sustainable trade. As argued above, the new strategy has potential not only to generate the economic benefits on which China has based its growth over the past years, but also to constitute a new form of development that offers a long-term, high quality of life to its citizens while laying the foundation for a more equitable, more resilient and stable planet.

In undertaking even this modest foray into the uncharted world of sustainable trade, China has proved once again that it is not only a leader in trade growth but an innovator and a leader in the perpetual search for a better way forward.



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