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CHINA'S ACCESSION TO WTO:
MANAGING INTEGRATION AND INDUSTRIALIZATION



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A. Introduction

In *TDR 1999* the analysis of trade and growth in the developing world (Part Two, chap. IV) – prepared at a time when China's bilateral negotiations for accession to the World Trade Organization (WTO) were well under way – noted that, unlike other developing countries, China had managed to improve both its trade and growth performance over the past two decades. Many developing countries, particularly those which had resorted to big bang liberalization of trade and the capital account, experienced a simultaneous worsening of their external trade balances and declines in their economic growth rates. China, on the other hand, together with some smaller economies, bucked the general trend, expanding exports faster than imports and accelerating growth without relying on foreign savings. On the eve of its accession to the WTO,¹ China's trade in both goods and services had been growing at double-digit rates (more than twice the world average) for over a decade; it now accounts for almost 4 per cent of world merchandise exports and 3.5 per cent of imports.²

This strong trade performance has been associated with a growth in the share of manufac-

tures, mostly labour-intensive, which amounts to 90 per cent of China's total exports. China has also been increasingly involved in assembly of technology-intensive products: exports of telecommunications equipment and computers now account for a quarter of its total exports. A number of Chinese exports, including travel goods, toys, sporting goods, footwear and non-textile clothing, account for over 20 per cent of total world exports of these products. Raw materials and intermediate and capital goods (including machinery and equipment, chemicals, ores and metals) constitute the major share of China's imports, while the share of consumer goods is relatively small. China's main export markets are the leading industrialized countries, but it has also been strengthening its regional trade links, notably with the East Asian newly industrializing economies (NIEs). Its trade surplus with the United States now exceeds that of Japan with the United States, and it also runs surpluses with Japan and the European Union (EU) in merchandise trade (table 5.3 below).

The accession of China to the WTO has raised the issue of the possible impact of the adoption of multilateral trade disciplines on its trade

performance and on that of its trading partners. For China, accession implies, above all, liberalization and the opening up of its markets to greater foreign competition. For its trading partners, given the demographic and economic size of China, its accession to the WTO implies a significant change in the trading environment that will affect countries in different ways. For some, it presents an opportunity to pursue or expand their commercial interests in China's vast and growing market under the protection of multilateral rules and procedures, while others take a more cautious approach, emphasizing the added competition that will arise with China's accession. Perhaps the more important issue for developing countries is the extent to which China's accession could influence the trends discussed in the previous chapters, including the risk of a fallacy of composition.

Much has already been written on the possible implications of China's accession to the WTO, and some quantitative projections have been made for China and its trading partners. However, it is difficult to predict with any reasonable degree of accuracy the extent to which accession will change China's economic performance from the path it would have followed had it remained out of the WTO. This is not only because of the difficulty in determining the counterfactual but, more importantly, because the impact of accession will depend on how the agreements reached will be interpreted and implemented, and on the policy response of China and its trading partners to future economic developments resulting from accession. Hence, the purpose of this chapter is not to predict what may or may not happen to China or its trading partners, but to discuss the issues raised by China's accession in terms of the questions analysed in this *TDR*.

In order to place these issues in the broader context of historical experience, it is useful to analyse how the trade liberalization implicit in the conditions of China's accession to the WTO compares with the big bang liberalization pursued by a number of developing countries.³ It should first

be noted that China's liberalization in the context of its accession is part of a negotiated package involving certain long-term benefits and concessions from its trading partners. These include, in particular, the granting of a Permanent Normal Trade Relations status with its largest trading partner, the United States, and the eventual elimination of discriminatory, WTO-inconsistent, measures against China's exports within an agreed time frame.

Second, a comparison can be made in terms of the pace of liberalization. The bulk of China's liberalization is due to take place in the years immediately following its accession to the WTO –

and the market-opening commitments made by China are sweeping. They will profoundly affect the protected sectors of the economy in agriculture, industry and services. However, China's post-accession liberalization, especially with regard to its imports, actually constitutes part of an ongoing process that already started over a decade ago. Pre-accession tariff and non-tariff measures (NTMs) in China have not been high by the standards of some other developing countries that have been pursuing

import substitution strategies over the past few years. And the terms of accession allow phasing-out periods in a number of areas. In addition, the export drive that has so far dominated Chinese commercial policies has involved considerable liberalization of sectors that are directly linked to foreign markets, particularly where foreign-funded enterprises (FFE's) are involved.⁴

Third, China is not liberalizing out of failure. This is a major difference between China and other developing countries, where the decision to liberalize was prompted by their failure to establish competitive industries behind high barriers, and the expectation that closer integration into the trading system, by ensuring steadily rising export earnings, would prevent recurrent balance-of-payments crises and stop-go development. Liberalization in China is occurring during a period of extremely successful export expansion in manu-

For China, accession implies, above all, liberalization and the opening up of its markets to greater foreign competition. For its trading partners, it implies a significant change in the trading environment that will affect countries in different ways.

facturing, that is associated with a sound and sustained balance-of-payments position and a large stock of international reserves. Thus it is not designed to overcome a foreign exchange constraint. In this sense, it resembles more closely those economies that successfully liberalized their trade regimes, such as the Republic of Korea and Taiwan Province of China in the 1970s and 1980s (Agosin and Tussie, 1993: 28–29).

However, this does not mean that China is immune to the kind of difficulties experienced by countries that shifted rapidly from import substitution to outward orientation. The Chinese economy has a dualistic industrial structure. While it has a highly competitive labour-intensive, export-oriented manufacturing sector dominated by FFEs, it also has a fairly traditional capital-intensive industrial sector dominated by State-owned enterprises (SOEs), as well as an agricultural sector that enjoys a relatively high degree of government support and protection. Although the SOEs account for about half of China's exports, their sales are, on balance, directed primarily at domestic markets. The SOE sector has been undergoing transformation and restructuring for several years, but the reform process is far from complete. Thus a rapid dismantling of trade barriers and removal of subsidies could expose SOEs to foreign competition, which could undermine their export performance, as well as lead to a surge in imports. This may create problems not so much for the balance of payments – as has often been the case in countries with weak export bases – but for employment and living standards of workers employed by SOEs. Yet a rapid redeployment of labour to more competitive export-oriented, labour-intensive manufacturing is probably not feasible; nor is it advisable since it could flood the markets in these products and provoke contingency protection measures by China's trading partners through various mechanisms, such as transitional product-specific safeguards which are included among the conditions of accession agreed by China. Although a number of domestic policy in-

struments may be deployed to defend jobs so as to allow more gradual reform, problems of adjustment can be expected to arise in the short and medium term in sectors dominated by SOEs.

Finally, it is generally agreed that the impact of trade liberalization depends on how the exchange rate is managed, and in this respect China is better placed than many developing countries. To prevent payments difficulties and serious dislocations, it is often recommended that import liberalization be accompanied by currency devaluation. However, in a number of developing countries import liberalization was combined with liberalization of the capital account, which, in many instances, initially encouraged short-term, liquid capital inflows. While these inflows facilitated the financing of their growing trade deficits, they also exerted upward pressure on the exchange rate, thereby weakening competitiveness and export performance, and leading eventually to payments difficulties and financial crises. China, on the other hand, has a strong payments position and large inflows of foreign direct investment (FDI), and is therefore unlikely to experience payments difficulties, even in the event of a sharp surge in

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imports. This, together with its existing more restrictive capital-account regime,⁵ should allow China to manage its exchange rate, maintaining a tight grip on its currency, its capital flows and finances generally, in order to facilitate adjustment during the initial post-accession period.

How China will handle these problems will affect the outcome, not only for China itself but also for its trading partners. The analysis in the previous chapter suggests that trade liberalization in China may result in a surge in imports of certain resource-based products and those with high technology intensity, which will benefit countries that have a competitive edge in the manufacture of these products for export. On the other hand, it may improve the trading opportunities of Chinese enterprises by facilitating their entry into new markets. More importantly, accession can make

China an even more attractive location for foreign firms, and this could lead to greater competition among developing countries for FDI linked to the labour-intensive segments of international production networks. There are already signs that China has been attracting large inflows of FDI – including from economies in East Asia – seeking low-cost locations for exports to third markets; furthermore, many transnational corporations

(TNCs) are seeking to establish a commercial presence there. To the extent that such inflows divert investment from other developing countries, this can intensify competition among them to attract FDI. The outcome for China and other developing countries will also depend on the nature of inflows of FDI, and hence on the policy approach adopted by China and its competitors as well as foreign firms.

B. Accession: changes in China's import regime

1. Tariff and non-tariff measures (NTMs)

China had already reduced its tariffs significantly before its accession to the WTO. Both its simple and weighted tariff rates were more than halved between 1993 and 1998 (Ianchovichina and Martin, 2001, table 5). The effective tariff rate, as measured by the ratio of tariffs to total imports, stood at 4.5 in the first half of 1999 (JP Morgan, 1999: 6), and there were further cuts at the beginning of 2001. Most of these cuts were related to parts and components for processing in the manufacturing sector, with hardly any change in the weighted average tariffs on primary products, particularly agricultural commodities. Before accession, imported inputs by FFEs were generally exempted from tariffs, but most finished manufactured goods were subject to duties, which, in some cases, were quite heavy.

Table 5.1 provides data on weighted average tariff rates for 2001 and the agreed Chinese bound tariff rates reported in the Protocol of Accession, to be implemented over a 10-year period starting from the date of accession. The products are ranked according to percentage changes in bound tariff offers in relation to figures for 2001. The

decline in China's average weighted tariff rate between the time of its accession and the final year, from 13.7 per cent to 5.7 per cent, is quite significant, since it represents cuts over and above those already made.⁶ The table also indicates that heavily protected items are among those most affected by tariff cuts, including wheat, rice, plant fibres (cotton), sugar and vegetable oils among agricultural goods, and beverages and tobacco, motor

vehicles and parts, clothing and textiles. Further, China has also made commitments to eliminate NTMs, particularly those relating to agricultural products, which at present face high NTMs.

China had already reduced its tariffs significantly before its accession to the WTO, and most of the new reductions in tariffs and NTMs are to take place immediately or soon after accession.

Table 5.1

**POST-ACCESSION REDUCTION IN WEIGHTED TARIFF RATES FOR
CHINA'S MAIN IMPORTS^a**

Product group	Tariff rate		Tariff reduction (per cent) after			
	2001 (MFN)	final ^b (bound)	one year	two years	five years	final year ^b
Cereal grains	91.1	3.0	96.7	96.7	96.7	96.7
Oil seeds	96.9	3.9	96.0	96.0	96.0	96.0
Beverages and tobacco products	57.8	10.4	65.7	74.2	81.9	81.9
Electronic equipment	10.6	2.3	70.9	76.9	78.3	78.3
Vegetable oils and fats	39.3	10.2	50.2	58.3	74.0	74.0
Wood products	10.0	3.4	42.7	54.1	66.0	66.0
Paper products, publishing	9.3	3.3	39.3	51.7	64.2	64.2
Crops	21.7	8.4	32.5	46.8	61.2	61.2
Textiles	20.5	8.7	22.9	36.4	57.4	57.4
Plant-based fibres	84.3	37.7	39.4	47.4	55.3	55.3
Motor vehicles and parts	31.3	14.1	31.0	39.4	54.9	55.0
Dairy products	19.0	8.9	29.2	38.0	53.1	53.1
Vegetables, fruit, nuts	25.9	12.6	29.1	39.9	51.1	51.1
Machinery and equipment	13.4	6.6	37.0	45.7	50.7	50.7
Meat products	18.6	9.9	28.0	37.3	46.7	46.7
Sugar	77.9	43.8	27.3	35.5	43.8	43.8
Processed rice	114.0	65.0	43.0	43.0	43.0	43.0
Paddy rice	114.0	65.0	43.0	43.0	43.0	43.0
Wheat	114.0	65.0	37.7	40.4	43.0	43.0
Ferrous metals	9.1	5.2	37.5	40.5	42.8	42.8
Chemical, rubber, plastic products	14.1	8.1	22.2	27.6	38.0	42.8
Forestry	2.3	1.3	42.5	42.5	42.5	42.5
Food products	16.8	9.8	25.7	34.5	41.6	41.7
Fishing	14.2	8.5	21.0	31.0	40.2	40.2
Metals	7.0	4.2	35.7	37.9	39.5	39.5
Wearing apparel	23.8	14.9	10.8	20.4	37.3	37.3
Leather products	11.6	8.0	26.7	28.9	31.4	31.4
Meat	14.1	9.9	17.4	23.6	29.9	29.9
Transport equipment	5.0	3.6	21.2	25.0	28.4	28.4
Metal products	9.7	7.4	17.8	21.2	23.6	23.6
Mineral products	14.4	11.4	15.8	18.2	20.6	20.6
Petroleum, coal products	8.4	6.7	19.8	19.8	19.8	19.8
Manufactures	19.5	15.8	7.2	11.9	19.0	19.0
Animal products	9.4	8.0	9.3	11.9	14.5	14.5
Average of above	14.6	6.1	40.5	47.2	54.3	58.3
All goods	13.7	5.7	41.6	48.0	54.9	58.8

Source: UNCTAD, *Trade Analysis and Information System (TRAINS)* database, based on WTO figures.

a Weighted by China's imports of relevant items in 2000.

b At the end of the transition period.

It should be noted that while the period of phased reduction extends to 2005 and beyond, the bulk of the reductions in tariffs and NTMs is to take place soon after accession and in some cases even upon accession. During the first two years, tariffs on most agricultural and manufactured goods will be reduced, particularly on a number of highly protected agricultural products, motor vehicles and labour-intensive manufactures. NTMs on 162 out of 377 items will be eliminated upon accession and another 75 within two years, and all import licences will be eliminated upon accession.

2. Subsidies

The pressure on import-competing sectors will arise not only from the reduction in trade barriers, but also, perhaps more importantly, from the removal or reduction of subsidies. According to article 10 of the Protocol of Accession, China will eliminate all subsidies falling within the scope of article 3 of the Agreement on Subsidies and Countervailing Measures (SCM) of the WTO, namely "specific" subsidies paid upon export performance or those provided for domestically produced inputs in preference to imported products. For this purpose all subsidies provided to SOEs contingent on export performance will be viewed as "specific" if SOEs are the "predominant recipients of such subsidies" or if they receive "disproportionately large amounts of such subsidies". They would be regarded as specific since similar subsidies are not paid to private firms.⁷ For agricultural production, domestic support of up to 8.5 per cent of output value is allowed, but all other subsidies, notably those contingent upon export performance, are not allowed. According to article 12 of the Protocol of Accession, "China shall not maintain or introduce any export subsidies on agricultural products". China has also agreed to comply with article 5 of the Agreement on Trade-related Investment Measures (TRIMs), and to eliminate foreign exchange balancing and local content requirements, as well as export or performance requirements.

Difficulties are likely to occur mainly in sectors dominated by SOEs and in agriculture.

3. State trading and non-discrimination

Following accession, China is subject to WTO rules on State-trading enterprises (Article XVII of the GATT) and on equal treatment of domestic and foreign firms and individuals (Article III of the GATT 1994) within three years. The combination of these rules implies that, with few exceptions, all transactions by State-trading enterprises and SOEs should take place on a commercial basis; no favourable conditions can be accorded for the purchase or sale of inputs and outputs and in their pricing or procurement (including transactions on imports and exports). However, with regard to imports, State trading will continue to be permitted for five categories of agricultural products (grain, vegetable oils, sugar, tobacco and cotton), crude and processed petroleum, and chemical fertilizers. Similarly, a number of agricultural products (cotton, tea, rice corn and soya bean), minerals and labour-intensive manufactured goods (including silk up to 2005, cotton yarn and some fabrics) can continue to be exported by State-trading enterprises (Protocol of Accession, Annexes 1A and 2A2).

China will also progressively extend the provision and scope of the right to trade for all firms, including foreign firms, and will aim at offering full "national treatment" within three years (excluding the above-mentioned items which can continue to be traded through State-trading enterprises). In other words, all foreign individuals and enterprises will be accorded the same treatment as domestic enterprises (article 5 of the Protocol). Article 5 also obliges China to discontinue, within three years, the practice of allowing a limited number of firms the right to trade within a restricted geographic region, referred to as "designated trading". A number of agricultural products (natural rubber, timber, plywood and wool) and acrylic and steel products are currently traded in this manner (Protocol of Accession, Annex 2B).

Finally, for many services, foreign investment will be progressively liberalized. For example, upon accession a share of foreign ownership in tele-

communications of up to 25 per cent is allowed in certain cities, but this will be raised to 49 per cent within three years and extended to cover more cit-

ies. Within five years, all geographical restrictions will be abolished. There are similar commitments for liberalization in banking and insurance.

C. Industrial structure, trade and employment

The above changes associated with China's accession to the WTO can be expected to have important consequences for that country's trade prospects and economic performance and for those of its principal trading partners and competitors. The crucial factor will be how vigorously China's industries can respond to the new set of incentives and restrictions, particularly on how effectively its export sectors exploit the new opportunities presented. As indicated above, given the dualistic structure of its economy, the costs and benefits involved in accession will affect different sectors differently, with difficulties likely to be experienced mainly in sectors dominated by SOEs and in agriculture. The analysis that follows suggests that while the problems of adjustment that could be faced in import-competing sectors may be serious, they are not insurmountable; on the other hand, the nature of China's export industry and market access conditions for labour-intensive manufactures set some limits to the gains that it could reap from accession.

There have been attempts to simulate and predict the overall impact of accession on trade and economic activity in China by using the so-called "general equilibrium" approach, mostly through Global Trade Analysis Project (GTAP) models. According to these simulations, accession

will not have an impact on the overall level of employment in China, but there will be intersectoral shifts in employment and output (Gilbert and Wahl, 2000). As is the case in any trade liberalization, accession will expand trade relative to output. Nevertheless, there are contradictory results concerning the relative impact of accession on imports, exports and output, which appear to

be due to differences in the models used. For example, according to a World Bank study for the year 2005, the impact on exports would be more pronounced than on imports (Ianchovichina, Martin and Fukase, 2000). In an earlier estimate by the International Monetary Fund (IMF), based on the assumption that China would enter the WTO in late 2000 or early 2001, the immediate impact on the current ac-

count would be positive, but it would turn increasingly negative over the period 2002–2004, before becoming significantly positive in 2005. It was suggested that any deterioration in the current account would be largely compensated by FDI inflows (IMF, 2000a: 63–65). The impact of accession on China's gross domestic product (GDP) would be negative, according to the World Bank study, but IMF estimates give a slightly positive effect for the period 2000–2005, except for the first year. An earlier study by the United States International Trade Commission (USITC) esti-

The nature of China's export industry and the market access conditions for labour-intensive manufactures set some limits to the gains that it could reap from accession.

mated that the Chinese offer for the bilateral agreement with the United States would increase Chinese imports and exports by 14.3 per cent and 12.2 per cent, respectively, thereby providing a significant growth stimulus for China (USITC, 1999c).

The difficulty with such “general equilibrium” models is that they tend to assume away the problems which, in reality, determine the outcome. Particularly with regard to unemployment, it is generally assumed that the labour market remains in equilibrium (i.e. total employment will not change) but that labour shifts rapidly among sectors in response to new incentive structures. In reality, however, such shifts are extremely problematic, which is one of the reasons why many industrialized countries are unwilling to remove entry barriers to markets for labour-intensive manufactures and agricultural commodities (UNCTAD, 2001b; *TDR 1995*, Part Two, chap. II). Moreover, accession to the WTO does not completely remove the danger of protectionism. Success in export drive can trigger defensive protectionist reactions in the form of safeguards and anti-dumping. Most of the models that are constructed on the principle of free markets do not allow for such factors.

A rigorous analysis of the implications of accession requires a good understanding not only of the conditions attached to accession, as noted above, but also of the structural and institutional characteristics of the sectors which will encounter new challenges due to the dismantling of support and protection, as well as of the potential for sectors that are better placed to exploit new trading opportunities that may arise from accession. This is the main focus of this section.

1. Trade liberalization, public enterprises and employment

China is entering the WTO while undertaking economic reforms – a process that has been under way for over two decades – in such areas as trade and industrial policies, labour market regulations, SOEs and social security. These efforts, particularly the reform of SOEs, which hold an important place in the Chinese economy, have no

doubt helped to prepare the economy for accession. However, restructuring and rationalization in this sector is incomplete, and these enterprises are likely to face increased competitive pressures following China’s accession. Accession is often seen as creating new opportunities and catalysing the reform process, but, unless properly managed, reforms can inflict social costs by leading to greater unemployment. Although China has experienced sustained and rapid growth over the past two decades, unemployment is relatively high.⁸

In spite of some shift in economic activities from the public to the private sector, SOEs still play an important role in the Chinese economy. These enterprises operate in a wide range of sectors including agriculture, industry and services: they are dominant in heavy industries such as power, steel, chemicals and armaments; and in banking, telecommunications, wholesale distribution and certain transport activities private firms are practically non-existent. However, in some light industries, such as toys, footwear and garments and retail consumer goods, private firms have a much higher share than SOEs. At the end of the 1990s, SOEs employed about 83 million people – representing 12 per cent of total employment and 47 per cent of employment in the manufacturing sector – and they accounted for 38 per cent of GDP (National Bureau of Statistics, 2000, tables 5–10). They account for about 45 per cent of China’s imports and about 50 per cent of its exports, but these exports constitute a small proportion of their overall production: about 9 per cent of GDP in terms of gross value and a smaller proportion in value-added terms. Primary goods account for 15 per cent of their exports, and chemicals, textiles, light manufactures, rubber products and machinery and transport equipment for the remainder.

State-owned enterprises are characterized by excessive employment, high inventory levels, low productivity, low capacity utilization, inefficient scales of production and outdated technology. Despite several years of reform, many of these problems persist,⁹ generally leading to losses; if they show surpluses (profits), these are negligible compared to their huge stocks of capital. Subsidies paid to SOEs have decreased in recent years, but the growing losses of industrial SOEs, as a proportion of their value added, have increasingly

been financed by credits from the banking system.¹⁰ Some SOEs, such as those in the automotive industry (box 5.1), also benefit from preferential treatment in obtaining loans and foreign currency contingent upon their export performance, as well as preferential tariffs subject to meeting targets for local content of finished goods.

Removal of subsidies, reduction of tariffs and NTMs, and elimination of preferential treatment will, no doubt, exert considerable pressure on these enterprises to improve efficiency and competitiveness, which may call for considerable restructuring and labour-shedding. Big bang liberalization can be both socially disruptive – particularly in the hinterland where many SOEs are located

– and economically counterproductive, as demonstrated by the experience of the Russian Federation and Eastern Europe (ECE, 1997: 75–84; 1998: 31–41). The scale of restructuring that remains to be done is immense. It has been estimated that about 35 million workers, or 17 per cent of the urban work force, are redundant (JP Morgan, 1999: 14). According to a recent study (Powell, 2001), China's accession to the WTO could cause unemployment to rise as high as 25 million over the period 2001–2006.

The experience with trade liberalization in developing countries shows that a sudden dismantling of support to and protection of domestic industry can have serious repercussions on employment conditions, resulting in job losses and widening wage differentials (*TDR 1997*, Part Two, chap. IV; UNCTAD, 2001b). It can also lead to de-industrialization, particularly in sectors confronted with competition from the mature industries of more advanced countries. Often, it is difficult to shift displaced labour to export sectors, particularly when skill-mix requirements are different and the prevailing productive capacity is inadequate. Adjustment to new sets of incentives is not instantaneous; rather, it is a time-consuming process requiring investment in physical and

human capital. In addition, for a large country like China, there is the further risk of flooding the market in labour-intensive products, particularly if restrictions on market access in industrial countries persist.

The SOEs likely to be worst affected by accession operate in industries such as machinery, electrical equipment, smelting and processing of metals, textiles, chemicals and chemical fibres,

transport equipment, non-metal mineral products and food processing. Together these industries account for 72.5 per cent of the workforce employed by SOEs (Bhalla and Qiu, 2002). The last column of table 5.2 gives the import/output ratios, in 1997, for the main agricultural and industrial sectors.

For some manufacturing sectors imports are low compared to domestic production, in large part owing to the protection and support provided to them. While some industries, notably machinery and equipment, are not heavily protected and there are large amounts of imports of such products, they may, nevertheless, face some pressure due to liberalization during the period immediately following accession. Two sectors particularly vulnerable to liberalization and import competition are the automobile and textiles industries (boxes 5.1 and 5.2, respectively). In the case of textiles, exports and imports are both important. Even though the sector is highly protected, the

SOEs involved incur losses. For minerals and metals, although the tariff rates are not high, the extent of tariff reductions will be significant.

Table 5.2 shows the results of simulations on the impact of tariff reductions alone on output and employment in various sectors, in

terms of deviation from the baseline, as of 2005. These results are partial and are not intended to describe the overall impact of accession on various sectors or on the economy as a whole. They should be interpreted with considerable caution since they do not take into account a number of factors noted above, including the impact of NTM

Unless properly managed, reforms can inflict social costs by leading to greater unemployment.

It is difficult to shift displaced labour to export sectors. Adjustment to new sets of incentives is a time-consuming process.

Box 5.1**EFFECTS OF TRADE LIBERALIZATION ON THE AUTOMOTIVE INDUSTRY**

The automotive industry, particularly automobiles, is an example of an inefficient, highly protected industry dominated by SOEs, which will be considerably affected by trade liberalization resulting from accession. There were more than 2,000 enterprises engaged in the industry in 1999, of which 120 were assemblers of cars and trucks (Powell, 2001: 47; Bhalla and Qiu, 2002). The industry as a whole employs 1.8 million workers. The share of value added in output and the share of profits in value added are low, and the sector exports only 2 per cent of its output. Automobiles benefited from 80–100 per cent nominal tariff rates in 1999, down from a range of 110–150 per cent in 1995–1999. The industry is subject to licensing quotas, and automobile imports, in particular, are also subject to non-tariff restrictions (USITC, 1999c, tables 3-2 and E-1). Thus the share of imports in total sales was less than 7 per cent in 1999, falling from about 10 per cent in 1995 as a result of expansion of assembly operations in joint ventures with foreign companies.

Collective enterprises, and particularly SOEs, dominate the sector, in terms of both employment and sales, although their share has declined in recent years: the number of workers employed by SOEs fell from 1.5 million in 1995 to about one million in 1999, while those employed by collective enterprises fell from 196,000 to 126,000 over the same period. Despite a sharp increase in private sector activities, total employment in the industry fell by 7 per cent. However, the decline in sales by public enterprises has been more than offset by increased sales by joint ventures, and particularly other private enterprises, which together increased their shares from 30.3 per cent in 1995 to 58.7 per cent in 1999.

The industry suffers from excess capacity, which reached 46 per cent in 1998. Labour productivity is also low and the unit labour cost is high. Only 2–4 vehicles are produced per worker a year compared to 20–40 vehicles in more advanced countries (Yang, 1999). An automobile made in China is 40–50 per cent more expensive than a similar make produced abroad.

For the motor vehicle industry there will be significant tariff reductions in the first two years following accession. In particular, tariffs for automobiles will fall from 80–100 per cent to 25 per cent by July 2006, with the largest cuts taking place soon after accession. Moreover, the ceiling for what is currently a prohibitive import quota will be raised to \$6 billion upon accession and will increase further by 15 per cent per year until it is fully eliminated. All services related to automobiles will be liberalized: distribution, marketing, after-sale services, financing, dealership, advertising and imports of parts will be opened up to foreign firms. Other changes include the abolition of local content requirements, reduction of tariffs on parts and elimination of subsidies.

UNCTAD simulations suggest that, as a result of tariff reductions alone, output can be expected to decline by more than 11 per cent by the year 2005, and the ratio of imports of motor vehicle and parts to output to increase by 9 per cent (see table 5.2). More importantly, loss of employment of skilled and unskilled labour could reach about 12 per cent and over 8 per cent respectively, resulting in about 200,000 job losses in the sector. These figures do not take into account the adverse effects of the abolition of the local content requirement, preferential access to loans and elimination of subsidies.

Table 5.2

SIMULATION RESULTS FOR THE IMPACT OF POST-ACCESSION TARIFF REDUCTION ON OUTPUT, EMPLOYMENT AND IMPORT/OUTPUT RATIO IN CHINA, BY SECTOR, 1997–2005

Sector of production	Difference between accession and non-accession ^a				Memo item: Import/output ratio in 1997 (Per cent)
	Output volume	Employment		Import/output ratio	
		Unskilled labour	Skilled labour		
		(Per cent)		(Percentage points)	
Oil seeds	-53.5	-60.6	-61.5	92.3	40.2
Beverages and tobacco products	-38.7	-35.3	-38.8	46.8	4.6
Vegetable oils and fats	-6.5	-4.5	-7.3	19.4	43.0
Motor vehicles and parts	-11.1	-8.1	-11.7	9.0	15.4
Other crops	-8.8	-12.1	-12.7	8.8	7.7
Textiles	2.1	3.7	0.6	6.7	22.0
Grains, vegetables, fruits	-4.8	-7.7	-8.3	4.9	1.7
Dairy products	-3.8	-1.9	-4.7	4.6	21.8
Machinery and misc. manufactures	-2.1	-0.2	-3.5	3.5	20.9
Wood products	-1.5	0.4	-2.8	2.8	16.9
Electronic equipment	14.4	15.5	12.5	2.7	59.5
Clothing	22.0	22.6	19.9	2.5	7.2
Mineral and metal products	-2.6	-0.5	-3.8	1.8	10.0
Forestry and fishing	-0.0	-0.0	-0.5	1.8	3.0
Processed rice	0.2	1.8	-0.9	1.2	1.1
Transport equipment	-1.5	0.5	-3.0	0.9	35.4
Fuels and minerals	-0.4	-1.5	-2.0	0.8	15.2
Chemical and petroleum products	0.5	2.4	-0.7	0.7	22.9
Services	1.8	3.9	0.4	0.0	3.2
Leather products	13.7	14.5	11.8	-0.0	11.2
Meat and meat products	5.4	6.7	4.1	-0.3	11.7
Animals and animal products	6.6	5.3	4.7	-1.7	1.7
Food products	6.0	7.3	4.8	-2.0	9.1

Source: UNCTAD secretariat calculations, based on simulation using a model developed by Global Trade Analysis Project (GTAP) (Hertel, 1997).

^a The comparison is between the values resulting from the simulation of China's performance after its accession to WTO and the values for a hypothetical situation without China's accession.

reductions, elimination of subsidies, selective dismantling of policies, difficulties in moving labour across sectors or problems of market access. This might lead to underestimating losses and overestimating gains. Nevertheless, simulations are useful in identifying the sectors that are vulner-

able to liberalization and the order of magnitudes involved.

The results indicate a nuanced picture. The impact of China's accession to the WTO on output and employment could be positive for clothing,

Box 5.2

TEXTILE AND CLOTHING INDUSTRIES IN CHINA: THE IMPACT OF LIBERALIZATION

There are indications that accession to the WTO could have a significant impact on the textiles industry in China. Unlike clothing, this industry is characterized by obsolete machines, low productivity, low-quality products and excess labour (USITC, 1999c, chap. 8). It employs 5.8 million persons, compared to 2.1 million in the clothing industry, and its total output is more than double that of the clothing industry. In 1999, the textiles industry accounted for about 6 per cent of China's industrial output and 14 per cent of the industrial workforce. It is dominated by loss-making SOEs and there are a large number of enterprises with low labour productivity. This is in contrast to the clothing industry, where SOEs are profitable and account for a small share of total sales. According to some estimates, in 1998 about 40 per cent of SOEs in the textiles industry were on the verge of bankruptcy (USITC, 1999c: 8-8 and table B.3). In general, the industry produces relatively low quality products, using traditional, labour-intensive techniques, although recently new FFEs have established some plants with more advanced technology.

The relatively high ratio of textile imports to domestic production (22 per cent) is not indicative of an absence of protection for domestic industry; rather, it signifies the dependence of clothing exports on imported textiles, particularly at the high end of the market: "about 55 per cent of China's exported apparel is made from imported fabrics" (USITC, 1999c: 8-5). The expansion of clothing exports is the main reason why the ratio of textile imports to exports has risen sharply in recent years.

Recent reforms in the textiles industry have involved a shift of ownership, from SOEs to FFEs, mainly from Hong Kong (China); this has been accompanied by the introduction of more recent technologies, more capital-intensive methods of production and higher labour productivity. It is noteworthy that because of the recent introduction of new capital-intensive techniques by FFEs in

INDICATORS OF CHINA'S TEXTILES AND CLOTHING INDUSTRY,^a 1999

	Textiles industry			Clothing industry		
	All enterprises	SOEs	FFEs	All enterprises	SOEs	FFEs
Number of enterprises	10 981	3 011	3 032	6 611	792	2 864
Sales (billions of yuan)	414.8	148.2	88.3	184.7	13.5	90.9
Percentage share in total sales of the industry	100.0	35.7	21.3	100.0	7.3	49.2
Value added as a percentage of output	24.7	26.9	24.2	24.8	28.4	24.9
Value added per worker (yuan per year)	21 900	15 300	38 500	24 500	16 800	25 800
Profits (billions of yuan)	3.90	-0.14	1.29	6.20	0.13	2.64
Profits as a percentage of sales	0.94	-0.09	1.46	3.36	0.96	2.90

Source: National Bureau of Statistics, *China Statistical Yearbook 2000*.

^a Only enterprises with annual sales of 5 million yuan or more are considered.

Box 5.2 (concluded)

the textiles industry, their labour productivity is now higher than that of the SOEs in this industry and also higher than that of FFEs in the clothing industry.

The reform of the textiles industry has also involved considerable labour shedding: while output barely changed during the period 1995–1999, employment declined by 35 per cent in the industry as a whole and by about 52 per cent in firms with sales of more than 5 million yuans. This was not compensated by higher employment in the clothing industry; on the contrary, while output in the clothing industry increased by 37 per cent between 1995 and 1999, employment declined by 23 per cent, in large part as a result of structural reforms and changes in ownership.

SOEs involved in the textiles industry have been running losses despite nominal tariff protection of the sector of more than 20 per cent. Their performance will further deteriorate as a result of significant reductions in tariffs and the reduction or removal of subsidies following accession. The liberalization of trade in clothing can also be expected to influence the competitiveness of the Chinese textiles industry. So far, low quality textiles produced by China have been used largely for the manufacture of clothing for domestic consumption, and imports of high quality clothing have been restricted by high tariff rates. Liberalization of clothing imports could shift domestic demand in favour of high quality clothing, which may lead to increased imports of high quality textiles. Although over time the quality of domestic textiles and clothing can be expected to improve, the short- to medium-term impact of accession could favour a rapid growth in imports of textiles. It is quite likely that the combination of accession and structural reforms could lead to even more labour shedding in the textiles industry, particularly since China will gain little additional market access in textiles and clothing in the short and medium term.

electrical equipment, leather products, animals and animal products, meat and miscellaneous food products; most other manufactures and agricultural products may be adversely affected. With a few exceptions, imports could rise relative to domestic production, and the increase could be particularly rapid in sectors such as beverages and tobacco products, most agricultural goods, motor vehicles, textiles and, to some extent, machinery. In textiles, the impact of the accession on domestic production could be negative even if, as suggested by the results of simulations, exports were to expand (box 5.2). In most cases, output losses are associated with the loss of unskilled, and particularly skilled, labour. Industries likely to be the most severely affected in terms of job losses are those dominated by SOEs, identified above. The shift in employment, from import-competing sectors to export sectors, needed to offset job losses could be significant, notwithstanding the problems of market access.

2. Foreign direct investment, employment and trade

It is generally expected that China's accession to the WTO will generate a surge in its exports. This has implications for other developing countries competing with China both in their own markets and, more importantly, in the markets of the major industrialized countries. Indeed, the simulations reported above suggest that the changed incentives structure resulting from trade liberalization could lead to a significant expansion of exports in a number of sectors, including electronics, apparel, leather products and other light industries. However, it appears that it is mainly improved market access, rather than the productive potential and competitiveness of China, that will determine export performance in most of these industries. If market access conditions for China do not improve following accession,

changed incentives may not easily translate into rapidly rising export revenues.

These considerations apply largely to traditional labour-intensive manufactures. By contrast, trade could expand rapidly in sectors which are linked to international production networks. Indeed, one of the benefits expected from accession is increased inflows of FDI from both inside and outside the region. Liberalization of trade and investment as a result of the accession, notably relaxation of the restrictions on foreign participation in joint ventures and equal treatment of foreign and national companies, will provide foreign firms with greater investment opportunities. In fact there are already some indications of a rapid increase in FDI inflows into China: after hovering at around \$40 billion during the period 1996–2000, they rose to \$47 billion in 2001, at a time when they were declining in other parts of the developing world. According to some preliminary figures, in January 2002, FDI had increased by 33.5 per cent over the previous year, and contractual foreign investment, which tracks future projects, by 48 per cent (*International Herald Tribune*, 12 February 2002).

Some of this investment is motivated by the need for establishing a commercial presence for collaboration with certain domestic industries so far closed to foreign companies, notably in services; another important motive is likely to be the desire to take advantage of China's low labour and infrastructure costs. This tendency is reinforced by the pressure that the current global downturn is exerting on firms to maintain sales by cutting costs. According to a recent survey, one fifth of Japanese TNCs plan to relocate production to China (UNCTAD, 2002b). For reasons discussed in the previous chapters, such a surge in FDI would result in increased two-way, or even three-way, trade in sectors that are involved in international production networks. Thus, expansion of FDI is expected to be associated with a rapid rise in exports and imports. Similarly, China's accession to the WTO may encourage firms to further outsource production to China of traditional labour-

intensive manufactures, such as clothing, to take advantage of special tariff provisions in industrialized countries, notably the United States, for products that contain inputs originating from their home countries.

According to available data, the cumulative stock of FDI in China now amounts to over \$350 billion, almost exclusively in greenfield projects.

Most of this investment comes from the leading industrialized countries (Japan, the United States and members of the EU) as well as from the East Asian NIEs. However, a large number of FFEs are owned by investors of ethnic Chinese origin from Hong Kong (China) (about 48 per cent), Taiwan Province of China (8 per cent) and Singapore (about 6 per cent);¹¹ those from Japan, the

United States and the EU each own 7–9 per cent, but their investments in China have been rising more rapidly in recent years (JP Morgan, 2001b: 69).¹² Much of the FDI originating from industrialized countries is oriented towards China's domestic markets, and an important share of the production and imports of the FFEs is for sale in China. For instance, it has been noted that:

[While] US exports to China roughly tripled between 1990 and 1998, affiliate sales soared by more than 21 times over the same period (1998 is last year of available affiliate data). That is, from a low base, to be sure – affiliate sales in 1990 totalled just \$639 million. Nevertheless, in 1998, US exports to China and affiliate sales were roughly equal at \$14.2 billion and \$13.9 billion, respectively. (Morgan Stanley, 2001)

The strong increase in income transfers and reinvested earnings by United States TNCs in more recent years, from \$543 million in 1998 to \$2 billion in 2000, suggests that this trend is continuing (Lowe, 2001). There are also some exports by United States affiliates in China back to the United States that benefit from special tariff provisions provided to imports containing inputs originating in their home country.¹³

Foreign-funded enterprises (FFE) in China, owned mainly by investors from East Asia, are

If market access conditions for China do not improve following accession, changed incentives may not easily translate into rapidly rising export revenues.

generally small and medium-sized enterprises (SMEs) that are highly export-oriented and involved in the last stages of processing and assembly operations. These FFEs have a higher degree of labour intensity and export orientation than those in the first-tier NIEs and the Association of South-East Asian Nations (ASEAN). Indeed, the share of their processed exports in total exports was over 55 per cent in 2000 (MOFTEC, 2001, table 4). The direct import content of exports by FFEs in China is high, estimated at some 50 per cent, and intra-firm trade accounts for as much as 30 per cent of imports of FFEs.¹⁴ For FFEs involved in processing, the import content of their exports is even higher, at almost 70 per cent (MOFTEC, 1999). The ownership structure of these enterprises and the high import content of their manufactures have contributed significantly to strengthening the trade links between China and the East Asian economies, notably the first-tier NIEs and Japan.

The share of FFEs in foreign trade has been rising rapidly in recent years: their exports increased from less than 2 per cent of total Chinese exports in 1986 to 48 per cent in 2000, while their imports rose from less than 6 per cent to almost 52 per cent. As noted above, SOEs account for much of the remaining exports and imports, while domestic private firms have a negligible share in foreign trade. Most FFEs are located in China's coastal and northern regions, where infrastructure is highly developed, and their activities are concentrated in the assembly of electronic equipment and in the production of machinery and equipment (Cerra and Dayal-Gulati, 1999; USITC, 1999c, chap. I).

Since FFEs tend to use more capital-intensive techniques than local firms in similar industries, their contribution to job creation is modest, considering that their exports account for about 9 per cent of GDP; according to available data, these firms employed 5.4 million workers in 1996, or less than

0.8 per cent of the total labour force (Rosen, 1999: 87, table 3.1). This suggests that their scope for absorbing workers released from SOEs in labour-intensive export industries will be very limited.¹⁵

Even if employment in export industries dominated by FFEs were to double, they cannot be expected to absorb more than a fraction of the labour expected to be released, according to even the most conservative estimates noted above.

Table 5.3 provides data on the origin of total merchandise imports and the destination of exports for China as a

whole and for the FFE sector. A number of conclusions emerge. First, FFEs in China run a trade surplus primarily with the United States and deficits with the East and South-East Asian economies. This suggests that FDI from investors in East Asia uses China as an export platform for the Western markets, and that their home countries provide the inputs needed in such operations. Second, comparing the trade data for FFEs with total trade, it can be seen that China's export surplus is generated by national firms, notably SOEs, rather than foreign firms. Again, this is a reflection of the high import content of exports and low value added in the FFE sector.

According to the latest available figures, total profits earned by FFEs in China were in the order of \$20 billion (IMF, 2000b); this exceeded their export surplus by a wide margin. Thus they were in deficit in terms of foreign exchange earnings, which means that they had a negative impact on the current account. A significant proportion of their profits (about \$12 billion) was reinvested in China, adding to the stock of FDI and, hence to the earning capacity of foreign firms (i.e. the foreign exchange deficit of the FFE sector was

financed by new inflows of FDI). A similar situation was observed for Malaysia, as explained in *TDR 1999* (pp. 120–123). Meeting such deficits by simply relying on new FDI inflows would be similar to engaging in an unsustainable process

China's export surplus is generated by national firms, notably SOEs, rather than foreign firms, reflecting the high import content of exports and low value added in the FFE sector.

Profits earned by FFEs in China exceed their export surplus by a wide margin.

Table 5.3

REGIONAL COMPOSITION OF CHINA'S EXTERNAL TRADE, 2000

(Billions of dollars)

Trading partner	Total			of which: Foreign-funded enterprises		
	Exports	Imports	Balance	Exports	Imports	Balance
All economies	249.2	225.1	24.1	119.4	117.3	2.2
NIEs	66.6	63.2	3.4	36.0	39.2	-3.2
ASEAN ^a	11.6	17.1	-5.5	3.9	8.6	-4.7
Japan	41.7	41.5	0.1	23.3	28.4	-5.1
European Union	38.2	30.8	7.4	17.3	16.6	0.7
United States	52.2	22.4	29.8	28.8	10.0	18.8
Other economies	39.0	50.1	-11.1	10.1	14.5	-4.3

Source: UN/DESA, *Commodity Trade Statistics* database; Customs General Administration of the People's Republic of China, *China Customs Statistics Year Book 2001*.

^a Excluding Singapore.

of "Ponzi financing" (that is, servicing debt by incurring new debt).

Thus a surge in FDI runs the risk of resulting in a considerable expansion of both imports and exports without, however, bringing concomitant increases in value added and employment. This can be avoided if the nature and composition of the new investment were substantially different from the existing stock of foreign capital. This, in effect, appears to be the case with recent Japanese investment; there are signs that Japanese FDI in China may not simply involve relocating labour-intensive processes, but also the migration of a variety of large-scale industries, including capital- and skill-intensive ones, in chemicals and consumer electronics, for example. It has been suggested that "China appears to be 'leap-frogging' the development process seen in ASEAN countries, whereby Japan first invested in relatively 'low-tech' industries and only later in more 'high-tech' operations ... China is moving much more rapidly up the ladder" (*Oxford Analytica*, 2002b). This second round of "hollowing out" by Japan, after the migration of some of its large-scale industries to South-East Asia in the early 1990s, is beginning to cause concern in that coun-

try, leading to pressures on China to revalue its currency in order to deter Japanese firms from shifting production to China (*TDR 1996*, Part Two, chap. 1).

Certainly, the Chinese economy has the potential for developing self-contained, technology-intensive, large-scale manufactures that combine high quality human capital with low labour and infrastructure costs. It also has the market to support large-scale production. Such a process, based on rapid upgrading, can establish mutually reinforcing links between FDI, trade and growth. If such a route is not taken, and accession simply encourages the use of the Chinese economy as an assembly platform for low-value-added exports, the benefits of rising FDI inflows could be extremely limited in terms of technological upgrading and industrialization. This, together with the fact that China has not gained significant market access in traditional labour-intensive manufactures, implies that it may not realize the expected degree of benefits in terms of export expansion.

Again, the extent to which increased inward FDI creates competition for the developing economies in the region, notably the second-tier NIEs,

depends on the nature of the investment. If it serves to relocate labour-intensive processes to China, such an approach may create trade-offs and stiff competition among countries with surplus labour and a high degree of reliance on FDI, and provoke a race to the bottom. In particular, competition for FDI between China and the less advanced developing economies of the region that

have weak trade links with China can intensify, while China itself strengthens its trade relations with industrialized countries and the more advanced developing countries. Such problems can be avoided to the extent that FDI is used for technological upgrading and if greater attention is paid to domestic markets for absorbing the surplus labour.

D. Trade prospects

The new trading opportunities for China will be mainly in labour-intensive manufactures and participation in the labour-intensive segments of the production process of high-tech manufactures. In these activities competition among developing countries will tend to increase. On the other hand, there will be an increase in China's imports of a number of capital- and technology-intensive products in sectors dominated by SOEs. Since the industrialized countries and the more advanced developing countries have a competitive edge in these products, they are likely to be the main beneficiaries of increased imports by China due to accession; other developing countries with export structures similar to China's, on the other hand, will probably face the greatest competitive pressure. Established trade links are important in both respects since, in the short run, it is easier to exploit existing links than to create new ones. The following section examines the sectors and products where such opportunities and pressures may develop, and how they affect various countries.

1. *Costs, competitiveness and market penetration*

Low wages have been an important factor in China's impressive export performance, but they do not necessarily give the country a competitive edge in a wide range of manufactures because labour productivity is also low. China's average manufacturing wages are lower than those of the industrialized and developing economies listed in table 5.4, but its average manufacturing unit labour cost is higher than in seven of the developing economies. This is not surprising. Average labour productivity in China's manufacturing as a whole is low, despite the existence of highly efficient FFEs, because the SOEs suffer from excess labour and low productivity. Thus, as seen in that table, countries with much higher average manufacturing wages than China's (e.g. Chile, Mexico, the Republic of Korea and Turkey) have lower unit labour costs.

Low wages do not necessarily give China a competitive edge in a wide range of manufactures because labour productivity is also low.

Table 5.4

**WAGES AND UNIT LABOUR COSTS
IN MANUFACTURING: COMPARISON
BETWEEN CHINA AND SELECTED
DEVELOPED AND DEVELOPING
ECONOMIES,^a 1998**

Economy	Ratio to Chinese level of	
	Wages	Unit labour costs
United States	47.8	1.3
Sweden	35.6	1.8
Japan	29.9	1.2
Singapore	23.4	1.3
Taiwan Prov. of China (1997)	20.6	2.3
Republic of Korea	12.9	0.8
Chile	12.5	0.8
Mexico	7.8	0.7
Turkey	7.5	0.9
Malaysia	5.2	1.1
Philippines (1997)	4.1	0.7
Bolivia	3.7	0.6
Egypt	2.8	1.5
Kenya	2.6	2.0
Indonesia (1996)	2.2	0.9
Zimbabwe	2.2	1.2
India	1.5	1.4

Source: UNCTAD secretariat calculations, based on UNIDO, Industrial Statistics Database; and National Bureau of Statistics, *China Statistical Yearbook 1999*.

Note: Wages and unit labour costs include social charges and fringe benefits; for calculation of unit labour costs average wages were divided by manufacturing value added.

a Ratios of average wages and unit labour costs in the economies listed to Chinese levels.

For labour-intensive manufactures, the picture should be different in view of China's export success in these sectors. However, comparative data on unit labour costs are not available at the sectoral level. Table 5.5 compares China's hourly labour costs, including non-wage labour costs, in textiles and clothing with those of a number of developed and developing economies. In developed countries, both textiles and clothing are more skill-intensive than in China, and figures on wages and labour costs are not directly comparable, as

the quality of labour is different in the two groups.¹⁶ By contrast, the skill mix and labour productivity are unlikely to differ much among developing countries, particularly in clothing where product standards are quite similar. As noted in box 5.2, labour productivity in Chinese clothing is much higher than in textiles. Consequently, lower Chinese labour costs are better indicators of its competitive edge in clothing, vis-à-vis other developing countries, than in textiles. The figures suggest that while China has a labour cost advantage in clothing compared to most middle-income economies, its competitive edge over India and Bangladesh, for example, is less clearcut.

Differences in absolute costs and market access conditions, as well as non-price factors, are the most important determinants of the extent to which countries can penetrate international markets in different products. One way of measuring the combined impact of these factors is through the indicator known as revealed comparative advantage (RCA). This is defined as the share of a specific product in total exports of a country relative to the share of the same product in world trade. A ratio exceeding unity indicates that the country has a competitive advantage in that product. An increase in that indicator points to an improvement in the competitiveness of the country in that product. It should be noted that RCA is only a proxy, with some shortcomings. For example, since trade data are reported on gross value rather than on a value-added basis, the RCA indicator does not reveal where competitiveness lies for products with high import content, particularly those assembled in low-wage countries. This problem can partly be overcome by applying the indicator to imports as well as exports.

Table 5.6 provides data on, and changes in, RCA for China's leading export products (ranked according to their RCA values). The products in which China has a very high RCA are either from the traditional labour-intensive sectors (mostly in the SITC 8 product groups) or the technology-intensive sectors (mostly in the SITC 7 product groups), where China is involved mainly in the labour-intensive assembly operations. The labour-intensive products with high RCA account for more than 37 per cent of China's total exports, compared to 18 per cent for technology-intensive products. In some of the labour-intensive prod-

Table 5.5

HOURLY LABOUR COSTS IN THE TEXTILES AND CLOTHING INDUSTRIES: COMPARISON BETWEEN SELECTED DEVELOPED AND DEVELOPING ECONOMIES AND CHINA,^a 1998

<i>Economy</i>	<i>Ratio to Chinese level of labour costs in textiles industry</i>	<i>Economy</i>	<i>Ratio to Chinese level of labour costs in clothing industry</i>
Italy	25.5	United States	23.1
United States	20.9	Costa Rica	12.2
Taiwan Province of China	9.4	Hong Kong, China	12.1
Hong Kong (China)	9.1	Republic of Korea	6.3
Republic of Korea	5.9	Mexico	3.5
Turkey	4.0	Guatemala	3.0
India	1.0	India	0.9
		Bangladesh	0.7
		Indonesia	0.4
Memo item:			
Hourly labour costs in China (United States dollars)	0.62		0.43

Source: Based on USITC (1999c), tables 8-2 and 8-4, which in turn are based on Werner International Management Consultants (1998).

a Ratios of hourly labour costs in the economies listed to the Chinese level.

ucts, however, China is losing its competitive edge (notably outer garments, textiles and cotton fabrics), while the increase in RCA is particularly strong in sectors with high technology intensity. This includes a number of products in which China did not have a very high RCA to begin with, such as computers. Moreover, China has gained significant market shares in a number of other technology- and capital-intensive goods which account for less than 1 per cent of its exports, including ships and boats, rotating electric plants, trailers and non-motor vehicles, sound recorders, office machines and cement (Shafaeddin, 2002).

When the RCA indicator is applied to imports of components of a product, it reveals whether or not a country is competitive in assembly operations (Ng and Yeats, 1999). When it exceeds unity for a component, it suggests competitiveness in such operations. When applied to a finished product, the higher the RCA, the less competitive is the country in its production. While an increase in RCA for components implies that the country

has become more competitive in assembly operations, for finished products a higher RCA implies that it is lagging behind more competitive producers.

Table 5.7 provides RCA values for China's leading imports. It includes both finished products and parts, which together account for nearly 63 per cent of China's total imports. Although some finished products also include imported parts, and hence there is some double counting, the number of such products is small; intermediate products and components constitute the bulk of the items in the table. As expected, most items in the table are products with high skill and technology intensity (SITC 7). Of the first 10 items with the highest RCA values, 7 are intermediate products and components, accounting for 27 per cent of China's imports. In fact, RCA values are high for all components and parts listed in the table, indicating that China is competitive in assembly operations. However, for some of these (telecommunications equipment and parts, rotat-

Table 5.6

**CHINA'S POSITION IN WORLD TRADE IN ITS MAIN
EXPORT PRODUCTS (AVERAGE, 1997-1998)**

SITC code	Product group	Product category ^a	Percentage share of product group in		RCA	ΔRCA
			China's total exports	World exports		
894	Toys and sporting goods	B	4.5	24.5	7.0	1.1
851	Footwear	B	4.4	23.0	6.6	1.0
845	Knitted outer garments	B	3.7	16.7	4.8	1.1
843	Women's textile outer garments	B	3.6	16.1	4.6	0.7
752	Computers	E	3.4	3.9	1.1	5.2
842	Men's textile outer garments	B	3.3	19.0	5.4	0.8
764	Telecom equipment, and parts	E	3.2	4.3	1.2	1.4
846	Knitted undergarments	B	2.7	17.3	4.9	1.1
893	Plastic articles	D	2.1	7.0	2.0	1.3
831	Travel goods	B	1.8	31.0	8.9	1.0
778	Electrical machinery	D	1.8	4.2	1.2	1.4
848	Apparel and clothing accessories	B	1.7	26.4	7.5	1.1
759	Parts of computers and office machines	E	1.6	2.8	0.8	1.8
899	Miscellaneous manufactures	F	1.6	16.4	4.7	0.9
775	Household equipment	D	1.6	8.8	2.5	1.3
652	Woven cotton fabrics	B	1.6	12.3	4.1	0.7
762	Radios	E	1.5	18.9	5.4	1.2
658	Made-up textile articles	B	1.5	18.6	5.3	0.7
821	Furniture and parts thereof	B	1.5	5.0	1.4	1.3
653	Woven man-made fibre fabrics	B	1.4	8.5	2.4	1.1
771	Electric power machinery	D	1.2	8.6	2.5	1.5
844	Textile undergarments	B	1.2	17.0	4.9	0.6
651	Textile yarn	B	1.2	6.5	1.9	0.9
776	Transistors and semiconductors	E	1.2	1.1	0.3	2.0
333	Crude petroleum	A	1.2	1.0	0.3	0.5
772	Electrical apparatus	D	1.2	2.9	0.8	1.4
699	Base metal manufactures	C	1.0	4.4	1.3	1.1
885	Watches and clocks	E	1.0	12.0	3.4	0.9
Total shares of above items			59.7			

Source: UNCTAD database.

Note: RCA is revealed comparative advantage, which is used as an indicator for competitiveness. ΔRCA is the ratio of RCA for 1997-1998 to the RCA for 1992-1993.

a The classification in this table of products into product categories follows that in chapter III of this *TDR* and of *TDR 1996*, Part Two, chap. II. The categories are as follows: A = primary commodities; B = labour-intensive and resource-based manufactures; C = manufactures with low skill and technology intensity; D = manufactures with medium skill and technology intensity; E = manufactures with high skill and technology intensity; F = unclassified manufactured product.

Table 5.7

Rank	SITC code	Product group	Product category ^a	Percentage share of product group in			
				China's total imports	World imports	RCA	ΔRCA
1	583	Polymerization products	E	5.5	9.8	3.8	1.3
2	776	Transistors and semiconductors	E	5.2	3.5	1.3	1.6
3	764	Telecom equipment, and parts	E	4.7	4.7	1.8	0.8
4	728	Specialized machinery and equipment	D	3.6	7.8	3.1	0.7
5	333	Crude petroleum	A	3.1	2.0	0.8	1.8
6	653	Woven man-made fibre fabrics	B	3.9	12.0	4.7	1.2
7	674	Iron or steel universals and plates	C	2.6	6.8	2.6	2.3
8	759	Parts of computers and office machines	E	2.6	3.1	1.2	2.3
9	792	Aircraft	E	2.3	3.8	1.5	1.1
10	334	Petroleum products	A	2.2	3.2	1.3	1.2
11	641	Paper and paperboard	B	2.2	4.2	1.6	1.7
12	651	Textile yarn	B	2.1	7.9	3.1	1.1
13	772	Electrical apparatus	D	2.0	3.8	1.5	1.6
14	562	Manufactured fertilizers	E	1.9	14.8	5.8	0.9
15	778	Electrical machinery	D	1.9	3.2	1.2	1.3
16	611	Leather	B	1.4	14.0	5.4	1.1
17	736	Machine tools for working metal	D	1.3	6.0	2.4	0.8
18	724	Textile machinery	D	1.3	8.0	3.1	0.5
19	874	Measuring and analysing instruments	E	1.3	2.8	1.1	1.0
20	686	Copper	A	1.3	5.7	2.2	0.9
21	716	Rotating electric plant and parts	D	1.2	5.6	2.2	0.9
22	652	Cotton fabrics	B	1.1	7.7	3.0	1.6
23	081	Feeding stuff for animals	A	1.1	6.5	2.5	3.2
24	749	Non-electrical accessories of machinery	D	1.1	2.4	0.9	1.0
25	281	Iron ore and concentrates	A	1.1	11.9	4.6	1.4
26	582	Condensation products	E	1.1	4.9	1.9	1.7
27	752	Computers	E	1.1	0.8	0.3	1.3
28	744	Mechanical handling equipment	D	1.0	4.0	1.6	1.2
29	741	Heating and cooling equipment	D	1.0	3.2	1.3	0.8
30	657	Special textile fabrics	B	1.0	7.4	2.9	0.9
Total shares for above items				62.8			

Source: UNCTAD database.

Note: See table 5.6.

^a See table 5.6.

ing electric parts, non-electrical accessories of machinery, heating and cooling equipment and parts), RCA values show a decline between 1992-1993 and 1997-1998. This suggests that China has improved its capacity to produce such components. Finally, for some finished products (miscellaneous electrical machinery, measuring and checking instruments), their share in imports and their RCA indicators declined between 1992-1993 and 1997-1998, suggesting that the country is building up capacity in these sectors. These results are consistent with the findings of an earlier study, which concluded that China's capability in production and exports of components was greater than that of a number of ASEAN countries and NIEs, namely Hong Kong (China), Indonesia, Malaysia and Thailand (Ng and Yeats, 1999, tables 1 and A.1).

2. Competition with other developing countries

These changes in the composition and direction of China's exports and imports have important implications for other economies, although these will vary depending on their location in the international division of labour and on the technological scale. Competition would be greater with countries having a similar export structure to China's, while greater complementarity can be expected for countries which have the capacity to supply the products in which the Chinese economy does not have a competitive edge. In general, as noted above, the East Asian NIEs, and particularly some members of ASEAN, whose light manufactured goods account for the bulk of their exports, can expect to face greater competition from Chinese manufactured goods. In Latin America, Mexico is likely to face more competition from Chinese exports than other economies in view of the relatively higher share of manufactures in its exports. African countries are unlikely to be affected by greater competition since, with the exception of some North African countries and Mauritius, their manufactured exports are generally negligible.

Much of the competition in manufactured exports occurs in the markets of the major industrialized countries, notably the United States: it is

the single most important market for Chinese capital goods. The EU is the leading market for China's chemicals, and the second for most other exports, while Japan is the largest importer of China's power-generating machinery. The United States is the main destination, followed by Japan and the EU in that order, for most Chinese light manufactures, except travel goods, articles of plastic, toys and sporting goods, for which the EU is the main market. For Chinese textiles and clothing exports, including exports channelled through Hong Kong (China), the United States is the main market.

China's penetration of markets of developing economies in manufactures varies in both extent and composition. It has closer trade links with the Asian economies, particularly the first-tier NIEs and ASEAN, than with the Latin American and African countries. However, less than 10 per cent of China's exports of light manufactures (mainly textiles and textile fibres, travel goods, clothing and leather products) go to Asian developing economies, and much less to other regions: about 2 per cent of light manufactures and 4 per cent of textiles go to Africa. A somewhat similar pattern is observed for Latin America, where clothing and travel goods are the leading imports from China. However, while these figures are small for China, they constitute an important share of the markets in smaller African and Latin American economies.

3. China's imports from developing countries

As noted above, the opportunities for increasing exports to China as a result of its accession are likely to be strongest for countries at higher levels of industrialization as well as those rich in natural resources. Developed countries can be expected to benefit the most. Judging from its past trade linkages with China, the United States can benefit mainly from China's liberalization of agriculture and increased imports of some capital goods (mainly electrical machinery and components), while Japan and the EU countries can be expected to increase their exports of manufactured products, particularly textiles, electrical and non-electrical machinery, and motor vehicles.

Among the developing economies, the more advanced ones, such as the Republic of Korea, Singapore and Taiwan Province of China, as well as some of the ASEAN countries, are expected to increase their exports to China of manufactures, particularly capital goods which constitute a higher proportion of Chinese imports. Liberalization of China's agricultural imports can be expected to present new export opportunities not only for some Asian countries, which already have high shares in Chinese imports of such products (table 5.8), but also for some Latin American and African countries.

Table 5.8 shows that the bulk of Chinese imports of manufactures, food and agricultural raw materials comes from Asian developing economies. However, there are considerable intra-regional variations in terms of their share in China's total imports. Although light manufactures and food are the main South Asian exports to China, their share in China's imports is about 1 per cent. By contrast, Taiwan Province of China, the Republic of Korea, Hong Kong (China) and Singapore are, in order of importance, the main sources of Chinese imports, and they are likely to benefit considerably from import liberalization by China. Trade conducted in the context of production sharing and outsourcing can only partially explain China's imports from these first-tier NIEs. Differences in the production and export structures of these economies account for much of the trade among them. While China has a competitive edge in labour-intensive manufactures, its capacity is limited in technology-intensive manufactures, including capital goods, in which some of the first-tier NIEs have made considerable advances. The Republic of Korea, in particular, is expected to benefit considerably from China's liberalization of the telecommunications and automobile sectors, through both trade and FDI; according to one estimate, that country's

exports to China could increase by \$1.7 billion a year (Cooper, 2000: 5).

The only significant manufactured products exported to China by Latin America are leather and leather products. Nevertheless, Latin America could benefit from China's liberalization of agriculture and consequent expansion of imports of agricultural products, particularly food. Currently, the only noticeable benefit possible for Africa is in agricultural raw materials. Expansion of Chinese imports of manufactures is unlikely to bring much

benefit to countries in these regions in the foreseeable future in view of their limited supply capacity and ability to compete in such markets.

In a number of areas, expansion of China's exports of final manufactured products can be expected to be accompanied by a concomitant increase in imports because of the high import content of its exports. For example, as noted in box 5.2, China has been increasingly relying on imports of textiles for use in its clothing exports. The main suppliers of textiles to China are Taiwan Province of China (accounting for about 25 per cent of Chinese textile imports), the Republic of Korea and Japan (about 20 per cent each). In the past, the textiles industry was labour-intensive, but there has since been a shift to capital-intensive methods – mainly through robotization – in which the more advanced economies of the region have a competitive edge over China. In addition, the relocation to China of clothing plants from Japan, the Republic of Korea, Hong Kong (China) and Taiwan Province of China has contributed to China's imports of high quality textiles from these economies – a trend

likely to increase with the expansion of China's clothing exports. Nevertheless, lesser developed countries in South and South-East Asia, which continue to use traditional labour-intensive methods in textile manufacturing and produce low qual-

The industrialized countries and the more advanced developing countries are likely to be the main beneficiaries of increased imports by China.

Liberalization of China's agricultural imports can be expected to present new export opportunities for some Latin American and African countries.

Table 5.8

**SHARES OF SELECTED ECONOMIES AND REGIONS OF ORIGIN IN
CHINA'S IMPORTS, BY MAJOR PRODUCT GROUP, 1999**

(Percentage)

Items	United States	European Union	Japan	Hong Kong (China)	Asia ^a	Latin America	Africa
All products	11.8	14.8	20.5	4.1	34.4	1.8	1.3
Food, beverages and oils	21.3	10.8	4.2	1.0	19.4	17.8	1.3
Agricultural raw materials	12.1	8.6	6.8	1.0	34.6	4.9	5.1
Manufactured goods	12.2	16.8	23.7	4.9	33.1	0.4	0.2
Chemicals	14.6	10.0	18.7	2.7	42.4	0.4	0.5
Machinery and transport equipment	14.1	23.8	25.7	3.9	25.3	0.2	0.1
Other manufactures ^b	7.6	8.4	23.3	7.8	41.3	0.8	0.4

Source: UNCTAD secretariat calculations, based on UN/DESA, *Commodity Trade Statistics* database, SITC Rev. 2.

^a Excluding Hong Kong (China), Japan and West Asia.

^b SITC 6 and 8, less 68.

ity textiles, are unlikely to benefit unless they rapidly upgrade their textiles industries.

Computers and office machines is another product category likely to be affected by China's accession. As seen in chapter III, these items have been among the most dynamic products in world trade, and China has gained market shares in them partly through greater participation in production sharing in the region. An expansion of China's exports in this sector can be expected to result in a concomitant increase in imports of their parts and components until China fully exploits its own potential to produce them domestically. In the past few years, about 60 per cent of China's imports

of components have originated from the East Asian NIEs and 27 per cent from Japan. Less than 30 per cent of China's finished products have been exported to the NIEs, 10 per cent to Japan and more than 60 per cent to the rest of world. Chinese imports of components are relatively evenly distributed between the less and more advanced NIEs: 18 per cent from Hong Kong (China) and Taiwan Province of China, 22 per cent from Singapore and the Republic of Korea, and 19 per cent from ASEAN (excluding Singapore). These strong regional trade links imply that while China competes with the NIEs in third markets for final products, at the same time it provides a considerable market for them in parts and components.

E. Conclusions: managing integration

China's accession to the WTO and its greater integration into the international trading system raise two sets of policy issues for that country. First, trading under a new set of rules and commitments will, no doubt, entail some adjustment problems over the short and medium term, notably loss of jobs and productive capacity in sectors dominated by SOEs. The key question in this respect concerns the kind of policy measures needed to ensure a smooth adjustment to new conditions. The second set of policy issues relates to trade and industrialization strategies. Here the key questions concern the extent to which China will rely on foreign markets and investment for industrialization and development, and the modalities of its participation in world trade. In other words, how does a carefully managed strategic integration, designed to accelerate industrialization and growth, differ from increased integration that relies on static comparative advantages driven by market forces?

Certain characteristics of the Chinese economy allow greater scope for managing rapid trade liberalization compared to most other developing countries. In middle-income countries a substantial reduction of tariff and quantitative restrictions on imports often releases pent-up demand for consumer goods, notably consumer durables such as cars and home appliances, leading to a surge in their imports. The greater the inequality in income

distribution at the time of liberalization, the higher the demand for such products relative to the level of income. In China, however, despite rising wage differentials and income inequality, the demand for and growth of consumer imports can be expected to be limited. Furthermore, since Chinese industry is much less oriented towards the production of luxury goods, there is considerable scope for using domestic taxation – including excise and value-added taxes – and credit mechanisms to deter such imports. In this respect, the experience of the first-tier NIEs, notably the Republic of Korea, provides useful lessons (*TDR 1997*: 179–182).

The standard advice for countries that undertake rapid trade liberalization is to devalue in order to prevent a deterioration in their balance of payments. This is unlikely to happen in China in the near future; on the contrary, as noted above, the country is already under pressure to revalue its currency to deter relocation of industries from some of its more advanced neighbours. However, it is important that China retain its autonomy and option to use the exchange rate, if need be, to prevent serious disruptions in certain sectors of its economy. A judicious combination of currency adjustments and domestic taxes may help to absorb the shocks to vulnerable industries without causing serious distortions in resource allocation or violating the commitments that the country has made in its accession to the WTO.

China's accession to the WTO raises two sets of policy issues.

China could invoke the provisions of Article XIX of the GATT and the Uruguay Round agreement on safeguards, which enable countries to take trade-restrictive actions to prevent serious injury to domestic industries, or threat thereof. Such safeguard actions should be combined with continued reform of the sectors concerned so as to ensure a smooth adjustment to new conditions arising from accession. The preceding analysis of the structure and competitiveness of Chinese industries has shown that serious injury may be caused in sectors in which the more – rather than the less – advanced trading partners of China have a competitive edge. Consequently, it can be expected that a full and transparent application of safeguard provisions, in compliance with the MFN obligation, will not cause serious impediments to the exports of most developing countries. Given its position in the global trading system, China is, in practice, better placed to utilize such provisions against disruptive trade originating from mature industries in its more advanced trading partners than from those in other developing country members of the WTO.

In the longer term, all these policies and reforms would need to be placed in the broader context of industrialization, growth and development in China. The analysis above shows that the scope for expanded, export-oriented activities to generate jobs and incomes for a large proportion of the labour force in China is limited. Furthermore, any large shift of the labour force to labour-intensive manufacturing runs the risk of flooding the markets and is likely to lead to increased protectionist barriers in the industrialized countries; this would have adverse consequences for other developing country exporters of such products as well as for China.

Various estimates and simulations clearly show the difficulties inherent in such a strategy.

First, there is a need for policy measures to ensure a smooth adjustment to new conditions.

The second set of policy issues relates to the extent to which China will rely on foreign markets and investment and the modalities of its participation in world trade.

Even relatively modest shifts in the labour force to export-oriented, labour-intensive manufactures imply large increases in world supply of these products and in the share of China in world markets. For example, the simulation in table 5.2 implies that if the export sector were to compensate for the loss of employment in the import-competing activities due to tariff reductions alone, the ratio of exports of goods and services to GDP would need to reach 41.5 per cent in 2005 – a level highly unrealistic even for such a low-income country as China, given its size. In such a scenario, China's shares in world

exports of clothing and leather products would be about 35 and 30 per cent, respectively. (For clothing, this implies that China would account for 70 per cent of the annual average growth of world exports.) Other estimates put these figures even higher. For example, the World Bank's estimate for the share in clothing is over 47 per cent, implying an annual growth rate of more than 37 per cent in China's exports of clothing (Ianchovichina, Martin and Fukase, 2000, tables 6 and 8). Another estimate puts China's share in world exports of clothing at 40 per cent for 2005 and 44 per cent for 2010 (Wang, 2000). It is unrealistic to expect that China's accession to the WTO will lead to such far-reaching changes in Chinese and world trade. Such an expansion of Chinese exports is not only likely to face structural barriers in China itself; it could also lead to intensified competition in labour-intensive manufactures, with attendant consequences for their prices and terms of trade.

On the other hand, any trade and industrialization strategy should recognize that China needs foreign exchange for financing imports associated with its continued rapid pace of capital accumulation, that – despite its large population – its economy may not yet be big enough to generate the demand needed to support some large-scale industries, and that competition in world markets is often essen-

tial to the success of late industrializers. Thus one might propose a rapid and well sequenced technological upgrading in manufacturing as an appropriate strategy which allows a shift from labour-intensive to technology- and skill-intensive manufactured exports. As noted above, a shift to high-value-added, supply-dynamic products would require a new strategy aimed at replacing imported parts and components with domestically produced ones. Such a strategy could also generate sufficient foreign exchange earnings without pushing the trade/GDP ratios to unsustainable levels. Moreover, it could help avoid the problem of a fallacy of composition and provide more space for less developed exporters of manufactures. Clearly, such a strategy would imply that for a large proportion of the labour force jobs would need to be created in domestic sectors, including services, while an important part of the skilled labour is transferred to export-oriented manufacturing. Over time, upgrading of skills would be essential for sustaining rapid industrialization.

In a sense, such a process appears to be already under way. As noted above, China continues to have a strong competitive edge in the assembly of skill- and technology-intensive products and

processing for export, but it has also been improving its capacity to produce more complex parts, components and finished products. This process can be accelerated and combined with reforms designed to upgrade production in large-scale, capital-intensive manufacturing sectors dominated by SOEs. China appears to have the potential to do so: it has an abundant supply of educated labour, and the cost of such labour is extremely low compared to most other developing countries. The latest data available, for the mid-1990s, indicates that the number of university graduates in China exceeds a million, compared with about 380,000 for Indonesia and the Republic of Korea. Moreover, engineers and scientists account for 35 per cent of the graduates as against an average of 24 per cent for Indonesia, Pakistan, the Philippines and Thailand, and 48 per cent for Singapore and the Republic of Korea. Similarly, the number of technicians per million habitants is 200, which is less than for the Republic of Korea (318) and Singapore (301), but much more than for India (108), Malaysia (32) and Thailand (30) (UNESCO, 1999). Thus China has the potential to leapfrog the industrialization process rather than continuing to rely on absorbing the surplus labour in relatively low value-added, labour-intensive manufactures. ■

Notes

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| <p>1 China became a member of the WTO in December 2001.</p> <p>2 In this chapter, the data on China do not include those for Hong Kong Special Administrative Region (Hong Kong, China), Macao Special Administrative Region (Macao, China) and Taiwan Province of China, unless otherwise specified.</p> <p>3 For a description and assessment of these experiences, see Agosin and Tussie (1993). See also <i>TDR 1999</i> (Part Two, chap. IV, and annex to chap. IV).</p> | <p>4 FFEs include equity joint ventures, contractual joint ventures, wholly foreign-owned enterprises and joint exploration companies for special extraction industries. They range from large transnational corporations to small and medium-sized enterprises owned mainly by investors of Chinese ethnic origin from East Asia.</p> <p>5 For a description of China's capital-account regime, see Ge (2001).</p> <p>6 According to a World Bank estimate, the weighted tariff rate will fall from 18.7 per cent in 1998 to</p> |
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- 7.85 per cent in 2005 (Ianchovichina and Martin, 2001, tables 2 and 4).
- 7 Social welfare charges paid to SOEs are also regarded as subsidies under the SCM Agreement.
- 8 For a discussion on the employment impacts of accession, see Bhalla and Qiu (2002), and Bhattasali and Masahiro (2001, appendix table 1) on the contribution of various sectors to growth in employment.
- 9 For instance, although Angang Iron and Steel Company has cut 30,000 jobs since 1995, its labour productivity is one sixth that of Posco of the Republic of Korea (Powell, 2001: 51). For modernization and lay-offs, see Bhalla and Qiu (2002). Sometimes the laid-off workers remain on the payroll and continue to receive a partial salary for a specified period. There were about 5.6 million such workers in 1995, increasing to 16 million in 1998 (Yang and Tam, 1999).
- 10 In 1997, losses of these enterprises amounted to 3.4 per cent of their value added, and less than half of this was financed by subsidies (Broadman, 2000). For profitability, see Choe and Yin (2000).
- 11 According to one estimate, 15–25 per cent of FDI inflows into China in the 1980s and early 1990s were round-trip investments originating in China. This is about half the inflow from Hong Kong (China) (Huang, 2002: 23).
- 12 For the various features of FFEs in China, see Huang (2002: 23–32).
- 13 Such imports rose tenfold between 1994 and 1998, reaching \$2 billion in 1998 (Morgan Stanley, 2001).
- 14 This is based on a survey undertaken by Long Quoqing in 2001 referred to in an UNCTAD discussion paper by Zheng (2002).
- 15 For a discussion, see Braunstein and Epstein (2002).
- 16 In developed countries, the textiles industry is more capital-intensive, and thus requires more skills. Similarly, their clothing industry uses quality and designs that demand better skills and knowledge.