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Some implications of accession to WTO for China's economy

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Abstract

The entry to WTO has positive effects on the economy of China, in the long run. During the early years of the accession, China may face serious challenges in the area of employment as China's gains in market access is limited, but it is to liberalize imports significantly. By 2005, an additional 25 to 50 million workers may become unemployed due to the competitive pressure from the accession. Attempts to expand labour intensive exports to compensate for employment loss, will result in significant increase in Chin's vulnerability to external factors and sever losses in terms of trade of the country and its competitors. Thus, greater reliance on domestic market is advisable in the future.

1. Introduction

China has joined the World Trade Organization. It is a large and growing partner in international trade and a major exporter of labour intensive products. China's accession to WTO will have important implications for China itself, as well as its competitors, its sources of supply of imports and for countries which constitute main markets for its exports. We have discussed the potential impact of China's accession on its competitors elsewhere (Shafaeddin, 2002). This report is devoted to some of its implications for China and its trade strategy in the future.

* The author is a senior economist working for UNCTAD. The views expressed in this article are his own and do not necessarily reflect the United Nations. He is grateful to Mr. Y. Akyuz, Mr. R. Rowthorn, Mr. G. Palma and his colleagues Ms Li, Mr. J. Mayer and Mr. And Tang for their comments and suggestions, but the author remains solely responsible for any shortcoming. Mr. J. Pizzaro has undertaken the simulations; I owe him my gratitude. An earlier version of this research was used as input to UNCTAD, Trade and Development Report, 2002.

Accurate assessment of various effects of the accession on China is not easy *ex-ante* as there are so many other internal and external economic and non-economic factors at work at the same time. For example, the pace of growth in the world economy and international trade is among the most important external factors. We will argue in this paper that in the long run, the accession could have net positive effects on the economy of China as it provides the country better access to markets, involving added security of market access and stability in foreign economic relationships. Yet, during the transition period, the country may face challenges, particularly in the area of employment that is the main concern of the Chinese authorities. Further, the country may have reconsider its strategy of heavy reliance on export expansion. In contrast to the literature which applying General Equilibrium Model concludes that China's entry into WTO will have little - or no - impact on general level of employment of the country, this paper argues that the positive impact of the accession on exports of China will be materialized slowly, but sudden import liberalization may lead to a surge in imports in early years after the accession competing with the products of inefficient SOEs and domestic agriculture. As structural problems impede shifts of resources from one sector/industry to another, severe unemployment may arise during the transition period unless the Government takes action to stimulate the domestic economy or devalue the currency.

To resolve unemployment problem, the Chinese Government may resort to devaluation (TDR, 2000, Piv) as a short-run compensatory measure to protect inefficient industries, and/or to a longer-term development strategy of shifting resources from import competing industries to the export sector. For China, as a large trading country, however, there is a limit on reliance on an export drive policy to tackle employment problem not only because of the resultant increase in vulnerability to external risks but also because of the adverse effects of such a policy on the net barter terms of trade of China as well as those of its competitors.

The following Section 2 is devoted to a brief presentation of the position of China in world trade. The main terms of the accession will be reviewed in Section 3. The overall impact of the accession on China's economy will be examined in Section 4. Section 5 is devoted to the impact of the accession on employment in import competing industries. The implications of the accession and export drive policies of China for its long-term development strategy will be discussed in Section 6. The last section will provide some concluding remarks.

2. The position of China in world trade and change in its trade structure

According to Table 1 in the year 2000, China accounted for about 3.9 *per cent* of world merchandized exports and 3.5 *per cent* of world imports. During the 1990s, the growth rate of value of its exports of both goods and services was more than twice greater than growth in world exports. So was growth in its imports of goods and services. For labour intensive products, the share of China in world exports is greater than the average ratio for its total exports. In 1998, China accounted for over 7.5 *per cent* of world exports of light manufactured products. In 1997/98, its share in world exports exceeded 31 *per cent* for travel goods, it was between 20 to 30 *per cent* for head gear and non-textile clothing, toys and sporting goods, footwear, and between 10 to 20 *per cent* for miscellaneous textile articles non-knitted undergarment, men's outwear, knitted undergarment, outer garment, women's outwear, and cotton fabrics (Shafaeddin, 2002, table 3).

Further, China has been increasingly involved in assembly of capital and technology intensive products, based mainly on imports of parts and components, which are basically labour intensive process for export. For example, between 1987 and 1998, the percentage share of China in world exports increased from 6.5 to 19.5 for telecommunications equipment and from 0.4 to 4.4 for automatic data processing products.[1] In other words, China competes in the international markets for processing of such products. Moreover, the Government intends to continue expanding export rapidly in the future. According to the new Five Year Plan, between 1999 and 2005, total value of exports of the country is expected to increase by over 74 *per cent.* Over the same period, the share of electrical and electronic products/machinery and hi-tech products in total exports of China is planned to rise to 50 *per cent* and 20 *per cent,* respectively.[2]

Rapid expansion of China's international trade has been accompanied with significant changes in the structure of its exports, in a way that it has also developed complementary trade relationships with a number of Asian countries, in particular, while it also competes with many of them particularly in the market for finished products. According to table 2, the importance of manufactured goods in Chinese exports has increased substantially, from under 60 *per cent* in 1987 to nearly 90 *per cent* in 1999. By contrast, the importance of primary products, particularly food and agricultural raw materials has

[1] Based on UNCTAD database.

[2] Mr. Shi Guangsheng, Minister of Foreign Trade and Economic Cooperation of China quoted in China.com 21st March 2001.

declined sharply. While manufactured goods still constitute around 80 *per cent* of imports of China, China has become net exporter of this group of products although the structure of its imports and exports of manufactured goods are different.

Mostly labour intensive and light products dominated "other manufactured products", which have taken an increasing share of exports and accounted for over half of total exports of China in 1999. The growth of exports of capital goods has been, however, a lot faster than light manufactured products. As a result, their share in total exports more than trebled over 1987-1999. Although the domestic value added in these products are mostly small as the bulk of activities in these areas remain assembly operations mainly owned by foreign companies, there is an indication that China's export structure is rapidly changing in favour of these products. If the country succeeds to increase local contents, it can become a major player in this field competing severely with Asian NIEs and ASEAN.

Textile and clothing, articles of plastics, particularly toys and sporting goods, leather and footwear, have increasingly become the main items of labour intensive export products. Automatic data processing and telecommunication equipment is among main items in "machinery and equipment" group. Nevertheless, all items have not expanded at the same rate. It is interesting to note at this stage that machinery items (SITC7) which figure among the main export products of China also appear among its main import items, because in production of the final products, China relies on imports of components partly from Asian NIEs and ASEAN.

At present, China is net importer of machinery and equipment, chemicals and ores and metal products (table 2). Nevertheless, imports of light manufactured goods are also significant; despite their declining share, they constituted around a quarter of imports of China. Textiles and clothing, articles of plastics, leather products and footwear are not only among the main export items, but also main import items. Although imports of raw materials (agricultural, fuel and ores and metal) are relatively small, China has become net importer of these products. The relative importance of fuel and ores and metal has in fact increased noticeably. China remains net exporter of food though its share in both export and import of the country has declined.

The relative importance of the institutions involved in foreign trade has also changed significantly in favour of foreign companies, which are involved mainly in assembly operation (processing) trade. In 1990, foreign-funded enterprises (FFEs) accounted for about 13 *per cent* and 23 *per cent* of commercial exports and imports of China respectively; their percentage share

reached 48 and 52 in 2000.[3] With the accession, it is expected that foreign investment will further accelerate. Nevertheless, State Owned Enterprises (SOEs) are still the main player among national enterprises and account for about 47 *per cent* of exports and 44 *per cent* of imports of China.

FFEs are owned mainly by investors of Chinese origin and Singapore. Hong Kong and Taiwan together accounted for over 56 *per cent* and Singapore for 5.2 *per cent* of cumulative foreign investment in China over 1992 – 2000.[4] Lately, investment by Republic of Korea, Japan and ASEAN countries has been also expanding fast. Therefore, it is not surprising that FFEs trade are mainly with NIEs, ASEAN and Japan. In 2000, 40 *per cent* of imports of FFEs originated from NIEs and ASEAN, 24 *per cent* from Japan, and 22 *per cent* from EU and USA. The involvement of foreign companies in processing trade and product sharing has led to high import coefficient of China's exports, which is estimated to be about 0.5 and to a relatively high share of intra-firm trade-reaching over 30 *per cent* of imports of FFEs. [5]

3. Main elements of the accession

The terms of China's accession to WTO do not appear to provide the country with much market access over short and medium-terms. By contrast, it obliges China to liberalize its imports significantly during the early years of the accession.

Market Access

Judging from the text of the protocol of accession, China gains little in terms of additional export market access in the short-run. China will enjoy only from two main changes resulting from the accession to WTO. One is that, as far as the USA market is concerned,[6] (the main market for China's exports) it will have obtained a permanent trade status, so it does not need to negotiate its trade agreement with USA on an annual basis. USA would in principle apply the

[3] Based on Ministry of Foreign Trade and Cooperations of China (2001) and their website.
[4] Based on J.P. Morgan, *Global Watch*, May 4, 2001, p. 69.
[5] Zheng, 2000.
[6] In 1999, USA has received about 22 *per cent* of China's exports according to UN statistics. Moreover, it is believed that considerable amount of textiles and clothing is exported, in addition, through third parties such as Hong Kong, Macao, Kenya etc. (see US.ITC, chap.8). It is estimated for example that in 1996 US imports from China was $51.5 billion according to USA Government, while Chinese statistics reported $26.7 billion. (Naughton 1998, table 5.1). Noland (1998) estimated that $10 billion worth of exports of textiles and clothing of China to USA was channelled through third countries.

tariff rates it has been applying to imports from China since 1980s. In other words, it will have confirmed the same market access conditions it has had with the USA. The only difference is that such a change will eventually provide China with better security in market access, thus reducing its risks of investment in export activities.

Another change resulting from China's accession is that it will enjoy removal of quota restrictions under MFA in accordance with the phase-out plan envisaged under Agreement on Textiles and Clothing (ATC). Although China is presently a member of MFA, it would not have necessarily enjoyed removal of trade restriction on these products if it had not joined WTO. Nevertheless, the design and implementation of ATC is such that even after the accession China, like other members of ATC, will enjoy little extra market access until year 2005 (ITCB, 2000.a and 2000.b).

More importantly, the terms of accession do not allow China to benefit from ATC equally with other members of MFA. Until 2005, when quota system is abolished, the expansion of Chinese quota under ATC will be more restricted than other countries. To explain, China can benefit from ATC from the date of its accession to WTO instead of January 1995 when ATC took effect. As a result, the base used for its quota expansion until 2005 will be smaller than otherwise would have been if it had signed the UR agreement in 1995. Moreover, the bilateral textile and clothing agreement with USA allows annual average growth rate of China's exports of 1 *per cent* until 2005. As a result, under the "growth on growth" provisions of ATC incremental increase in Chinese export cannot exceed 16 *per cent* between 2001 – 2005 as against 25 per cent for other countries. Moreover, beyond 2005 also exports of textiles and clothing of China will be further restricted by safeguard clauses explained below.

China can also enjoy some improvement in market access indirectly as a result of the accession. For example, it is believed that FDI in China will be encouraged as a result of further liberalization and China's obligation to change its rules and regulations towards equal treatment of domestic and foreign enterprises. The expansion of FDI will provide China with preferential access to US market in cases the companies involved in China use USA origin components in their assembly operates in China. The involvement of foreign companies may also help China in entering new lines of production when barrier to entry is important. None of these changes will, however, have any important immediate effects on exports.

Despite its accession to WTO, China's access to markets of WTO members will be subject to two "safeguard measures against market disruption". The first is a

special "transitional product-specific safeguard mechanism" which will be in place for 12 years from the date of accession and can be applied by any member to any product. According to article 16 of the Protocol of Accession, (para 16.2 and 16.3) in case *any* import item from China causes, or threaten to cause, market disruption in *any* WTO member, the problem should be first resolved through consultation with China. If consultation does not lead to China's action to "prevent or remedy the market disruption", the member affected " shall be free in respect of such [disruptive] products to withdraw concessions or otherwise limit imports only to the extent necessary to prevent or remedy such market disruption".

The second safeguard measure is related to the specific case of imports of "textiles and clothing products" by any WTO member until the end of 2008. Accordingly, if "a WTO member *believes* [italic added] that imports of Chinese origin…. were, due to market disruption, threatening to impede the orderly development of trade in those products", that member is permitted, under certain conditions to limit its imports of products concern from China. This provision is not included in the protocol, but China agreed to it during the negotiation (para 242 of the "*Report of the Working Party on the Accession Of China*, WTO, Document WT/Min (01)/3).

Another restrictive measure concerns imports of specific products, mostly labour intensive, including textiles and clothing (listed in Annex 7 of the Protocol), to certain WTO member countries. These countries include members of EU, Argentina, Hungary, Poland, Slovak Republic, Turkey, and Mexico. These countries can maintain existing import restrictions for the products mentioned above until "China fully confirms to WTO obligations"(para 243 of *Report of the Working party*…) which could last minimum 10 years from the date of accession.

Finally, in anti-dumping investigations, China will be subject to "non-market economy definition" for 15 years unless Chinese exporters can prove that products under investigation are produced according "to market economy considerations" (article 15 of the Protocol). The implication of this clause is that the price reported by the exporter may be regarded as dumping, thus provoking anti-dumping actions by the importing country/countries (Shafaeddin, 2000). If an importing WTO Member feels that the price of a product exported by China is "less than its normal value",[7] the importing country has the option of using the price level of a like product from a third country as a "normal value". As China is almost the lowest cost country for

[7] Article 2 of Agreement on Safeguard.

many labour intensive products, its export price could be lower than "normal value" thus subject to anti-dumping measures.

Change in the import regime of China

Upon the accession China becomes subject to all WTO rules and obligations as though it signed the UR agreements at the time they came into force i.e. 1995. The main channel of the impact, however, would be through reduction of tariff and non-tariff barriers, the lack of discrimination between domestic and foreign firms, including removal of restrictions on local contents, and removal of subsidies paid to loss making State Owned Enterprise (SOEs) contingent to export performance.

(a) Tariff and NTBs

Table 3 provides data on weighted average tariff rates for 2001 and the agreed Chinese bound tariff rates reported in the protocol of agreement, which would be applied after the phase-out period of ten years. The products are ranked according to percentage changes in bound tariff offers in relation to figures for 2001. Accordingly, the decline in the China's average weighted tariff rate between the time of the accession and 2010 from 13.7 to 5.7 *per cent*[8] does not seem to be significant. Both simple and weighted tariff rates more than halved between 1993 and 1998.[9] China has further cut its tariffs the latest at the beginning of 2001. Moreover, "measured by the tariff-to-total import [actual tariff revenue/to imports] ratio, it [the tariff rate] stood at 4.5 in the first half of this year [1999] or even lower if smuggling is taken into consideration".[10] Nevertheless, the tariff cuts since 1993, took place mainly in the parts and components for processing in the manufacturing sector; there was hardly any change in the weighted average tariff of primary products – mainly agriculture. Before the accession imported inputs by FFEs were mostly exempted from import duties but most finished manufactured goods were subject to duties – in some cases heavily.

Moreover, not all products are affected to the same extent by the tariff cuts offered to WTO Members under the protocol of accession. The table indicates that heavily protected items are among those most affected by tariff cuts. They include in particular, wheat, rice, plant fibres (cotton), sugar and vegetable oils among agricultural goods and beverages and tobacco, motor vehicles and parts,

[8] The World Bank estimate for the reduction in the weighted tariff rate is 18.7 in 1998 to 7.85 in 2005; see Ianchovichina and Martin (2001), tables 2 and 4.
[9] Ianchovichina, *Ibid*, table 5.
[10] J.P. Morgan, 1999.b, p.6.

clothing and textiles among manufacturing products.[11] Most of these items also employ a lot of labour. Further, China also has made commitments to reduce non-tariff barriers considerably (NTBs), particularly on agricultural products, which are presently also among products heavily subject to non-tariff barriers. Light-labour intensive products – do not suffer much in this respect (see Ianchovichina, 2000, p.4).

(b) Schedule of tariff reduction

It should be emphasised that while the reduction in tariffs and NTBs may take in some cases up to year 2005 or even 2010, the bulk of the reduction takes place in early years – some upon the accession. In fact, for both agricultural and manufactured goods, the bulk of the reduction in tariffs takes place during the first two years, particularly in the case of such highly protected products as: oil seeds, sugar, vegetable oils and fats, and labour intensive industries as textile and clothing, beverages and tobacco products, motor vehicles, (table 3) which involves employment of a large number of labour force.

According to the protocol of accession, NTBs on about 43 *per cent* of 377 items will be eliminated upon the accession and another 20 *per cent* during the second year. Most of these products are among agricultural ones and products involving large number of employees. Further, all import licences, mostly on agricultural commodities, will be eliminated upon the accession (annex 3 of the Protocol of Accession).

(c) Subsidies

The competitive pressure on import competing industries arises not only from exposure to reduction of trade barriers, but more importantly, perhaps, from removal or reduction of subsidies. China submitted a list of offers to WTO to phase-out subsidies over time. Nevertheless, after some tough negotiation, finally it agreed to immediate elimination of subsidies on exports of agriculture and subsidies paid to SOEs contingent to export performance. According to article 12 of the protocol of accession "…China shall not maintain or introduce any export subsidies on agricultural products". Similarly, according to article 10, it will eliminate all subsidies of any kind, falling within the scope of Article 3 of SCM, namely specific subsidies paid upon export performance, or those provided upon the use of domestic over imported products (Article 2.3 of SCM). For this purpose, all subsidies provided to SOEs contingent to export

[11] At the disaggregate levels higher tariff rates are observed for some products. For example the weighted tariff rate for automobile (excluding parts) is nearly 129 (Ianchovichina, Table 8); China has reduced tariffs on parts and intermediate products considerably in recent years.

performance will be viewed as specific if SOEs are the "predominant recipients of such subsidies" or they receive "disproportionately large amounts of such subsidies". As in most cases payments to SOEs are for loss making firms and the Government does not pay similar subsidies to private firms, or to other SOEs; hence they would be regarded "specific". Generally speaking, "specific" subsidies are prohibited; they include subsidies provided to specific enterprise, industry or group of enterprises or industries.[12] Hence, if WTO rules are strictly followed, China has to remove all subsidies contingent to export performance upon entry or in 2001.[13]

(d) State trading and non-discrimination

Upon accession, China will be subject to WTO rules on state trading (Article XVII of GATT) and equal treatment of domestic and foreign firms and individuals. The combination of these rules will imply that with few exceptions all transactions by SOEs should take place on commercial basis and no favourable conditions are allowed in purchases or sales of inputs, outputs and in their pricing or procurements. Presently, five categories of agricultural products (grain, vegetable oils, sugar, and tobacco and cotton), crude and processed petroleum, and chemicals are subject to state trading in import trade. Further, a number of agricultural products (cotton, tea, rice corn, soy bean) and labour intensive manufactured goods (silk, cotton yarn, and fabrics, containing at least 85 *per cent* of weight of cotton) are among products subject to state trading for exports. The protocol of accession also obliges China to eliminate all "designated trading" within three years. Designated trading provides a limited number of firms trading rights mostly restricted to a geographic region. Presently a number of agricultural products (natural rubber, timber, plywood, wool) and acrylic and steel products are subject to this type of trading (annexes 2A1, 2A2, 2B of the Protocol of Accession).

China will also progressively liberalize the availability and scope of the right of trade for all firms, including foreign firms, aiming at full equalization within three years, with the exception of a few commodities, which remain under state trading as outlined above. In many areas of services, foreign investment will be progressively liberalized. For example, investment in telecommunication will be limited to 25 *per cent* ownership limit in certain cities upon the accession, but will be further liberalized up to 49 *per cent* within three years covering more cities. Within five years, there will be no geographical restrictions. More or less similar commitments for liberalization are observed in banking and

[12] Social welfare charges paid to SOEs are also regarded as subsidies in SCM.

[13] Nevertheless, subsidies on investment in input to and production of agricultural products up to 8.5 per cent of output value is permitted.

insurance. In short, China cuts barriers to its imports significantly as a result of accession to WTO, particularly during early years of the accession. By contrast, it gains little in terms of market access for its exports at least for several years.

4. The overall impact of the accession on China

The impact of the accession on China is not easy to quantify for two main reasons. First, a number of other external and internal factors are at work at the same time. The main external factors include world economic situation, trade policies of the importing countries and policies of China's competitors. Among the internal factors, the role of government development policies, particularly ongoing structural reforms is the most important one. Secondly, China's obligation under the terms of the accession are numerous, all of which cannot be quantified easily. The literature is concentrated on the impact of tariff changes as they are easily measurable.

There is a body of the literature, which attempts to simulate the impact of the accession on various variables, including employment and output, using General Equilibrium approach mostly through Global Trade Analysis Project (GTAP) models. According to these simulations (see Gilbert *et al*, 2000 for a summary), which are based on restrictive assumptions, generally speaking the accession will not have an impact on overall level of employment. Nevertheless, there will be inter-sectoral shifts in employment and output. There is a general agreement, however, that the accession will contribute to trade expansion i.e. increases in the export/GDP and import/GDP ratios. In other words, both exports and imports will expand beyond what would be possible without the accession. Nevertheless, there are contradictory results on the relative impact of the accession on imports and exports. For example, according to a World Bank study for the year 2005 the impact of the accession on the value of exports will be more pronounced than its impact on its import value.[14] Assuming that China would enter WTO in late 2000 or early 2001, IMF estimated that the impact on the current account of the balance of payments would be first positive (0.2 billion dollars in 2001), then it would be increasingly negative over 2002-2004 and turn significantly positive in 2005. It is argued, however, that any deterioration in the current account would be largely compensated by the inflow of FDI.[15] According to a USITC study, the impact of the Chinese offer for the USA-China bilateral agreement would

[14] Ianchovichina, *et al* (2000).

[15] IMF (2000, pp.63-65). It is interesting to note that according to the World Bank study (*Ibid*) the impact of the accession on Chinese GDP would be negative, whereas IMF estimates a slight positive effect over 2000-2005 except for the first year, which is negative.

increase Chinese imports and exports by 14.3 *per cent* and 12.2 *per cent*, respectively.[16]

Table 4 provides the results of a simulation undertaken by UNCTAD on the impact of tariff changes committed by China on main economic variables of the country using GTAP model, similar to that used by the World Bank, for the year 2005. The figures show direction of changes; the magnitude of the figures particularly for exports, should not be taken seriously as the model is based on some unrealistic assumptions mentioned below. Further they underestimate the impact of the accession because the model takes into account the effects of changes in tariff only. Changes in non-tariff measures, subsidies, etc. are not captured by the simulation. Nevertheless, the results of the simulation provide some indications. The model measures the impact of changes in tariff in 2005 as compared with 1998 tariff rates (all weighted by imports in 2000) which were readily available through WTO. 1997 is used as the base year for all other dates as the model is based on 1997 data for which comprehensive information was available at the time of calculations. An outstanding result is that: the export sector will be higher in 2005 by nearly 14 *per cent* as a result of the tariff changes mainly due to the assumption of change of incentive in favour of exports. Although the GDP will be higher due to export expansion by over 2 *per cent,* the model predicts no change (about +1.2 *per cent*) in the output of the service sector (it assumes no change in tariff on services).

These simulations are oriented towards the year 2005 and beyond when the accession is fully implemented. The impact of the accession during the first years of the accession is often overlooked, as it is not captured by the models. There are three reasons to believe that during the early years of the accession the impact of the accession on import may be underestimated, while its impact on exports over-estimated. First, the impact of trade liberalization on imports is immediate, but its positive impact on exports involves some lags. Such lags are related to the gestation period for capacity expansion, market identification and information, marketing etc.

Secondly, as explained earlier, while China cuts barriers to its imports substantially, particularly upon entry, it gains little in terms of market access for its exports up to year 2005. Therefore, even if excess production capacity exists, the accession would provide little additional market outlays.

Thirdly, and more importantly, in the econometrics models used for calculating trade figures, it is assumed that trade liberalization would intensify comparative

[16] USITC (1999), Table ES-8. According to the same study the impact of the accession on Chinese output will be highly positive.

advantage of China for exports of labour intensive products. In all these models, the impact of tariff changes are calculated, but the impact of removal, or reduction, of subsidies on exports and on loss making SOEs engaged in import competing industries and to agricultural sector and changes in NTBs and other trading rules are not taken into account.

Another deficiency of the simulation models used is the assumption of rapid sectoral shift in production capacity and employment thus no change in overall employment; i.e. output and employment will grow by steady-state rates. The liberalization changes the structure of incentives in favour of export and against import-substituting industries. The reduction in output and employment in the import competing sectors will be matched, it is assumed, *immediately* with increases in output and employment in the export sector, and that labour will be perfectly mobile among various sectors. In reality, the intensification of competition of imports with products of these enterprises could lead to surge of imports, sectoral dislocation, unemployment and an increase in the risk of devaluation.

5. The sectoral impact of the accession on employment

China enters WTO in the midst of economic reforms, which has started late 1980s and intensified in 1990s and early 2000s. The reform has been widespread involving trade and industrial policies, labour market rules, SOEs, social security, etc. It will be argued here that while reforms have been accompanied with relatively high rate of GDP and exports growth, it has been at the cost of high rate of unemployment, that the contribution of the manufacturing and agricultural sector to employment has been nil; that despite their declines, the share of SOEs in output and employment is still high; that their reform is incomplete and SOEs in certain protected industries, which also employs a lot of people, are vulnerable to competitive pressure from imports thus to loss of output and employment. So are some agricultural products. The existence of high current rate of unemployment may make the Chinese Government sensitive to further increases in unemployment caused by the accession.

The setting

Despite high rate of growth of nearly 11 *per cent* in China's GDP during 1990s, the number of unemployed workforce in the urban area increased nearly three times reaching an estimated figure of 14 million. The actual rate of unemployment is considerably higher as the Chinese data on unemployment includes only registered unemployment in the urban areas for those people

whose age is between 16 – 50 for males and 16 – 45 for women (Bhalla, 2002). Unofficial estimates of unemployment in the urban areas range from 8 per cent (16 – 18 millions) and more.[17] The main reason for a combination of high growth of output and development of unemployment during 1990s was the lack of contribution of agriculture and manufacturing sector to growth in employment (see table 5). The rates of growth in value added for theses sectors were about 14 *per cent* and 4.3 *per cent* during 1990s, respectively (the same source as table 5); but their growth rates of employment were -0.9 and -0.8.

The increase in unemployment rate was mainly due to the reform of SOEs, particularly in the manufacturing sector (table 6). Although the increase in the share of private sector in output and employment is impressive, they have not been able to compensate for the decline in employment by state enterprises in absolute terms. For example, in the particular case of manufacturing sector, between 1995-99 the reduction in the number of people employed by SOEs and collective enterprises were 16.8 million and nearly 8 million, respectively. The number of people employed by "other enterprises" increased only by 5.3 million resulting in a reduction of 19.4 million in the number of people employed in the sector.[18] Private firms are mostly concentrated in assembly of electronics and production of apparatus and machinery[19], which employ less people than such industries as garments. The role of foreign funded firms, in particular in employment is not significant. These firms (including those funded by overseas Chinese), both joint-venture and wholly owned enterprises, employed 5.4 million Chinese in various sectors in 1996 which account for less than 0.8 *per cent* of total labour force.[20] They, however, accounted for about 45 *per cent* of total exports of China in 1998,[21] or equivalent of about 9 *per cent* of GDP in the same year. In addition to their pure objective of profit making, these firms are mostly involved in the last stage of production of capital and technology intensive industries, and even in the same industries they use more capital-intensive method than local firms.

In contrast to private firms SOEs have pursued social objectives, including employment, and have been subsidized, *inter alias*, for this reason. Therefore, they have aimed at high output and employment rather than profit. Inventories piled up by SOEs involved in manufacturing account for 2 *per cent* of GDP as against 2/3 *per cent* for manufacturing sector in OECD (Sachs and Woo, 2000, p. 23).

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[17] Website, Chinor-com, September 29, 2000.
[18] Based on *China's statistical* yearbook, 2000, table 5 – 2, 5- 8 and 5- 10.
[19] USITC, chap. 1
[20] Rosen, 1999.b, table 3.1, p.87.
[21] Lardy, 1999.

The share of public enterprises in GDP has declined considerably from 50 *per cent* to 38 *per cent* over 1990-98. Yet they still play a dominant role in employment. In 1999 they accounted for about 12 *per cent* of total employment, 41 *per cent* of urban employment and 47 *per cent* of employment in the manufacturing sector.[22] While in some light industries such as toys, footwear and garments and retail consumer goods the share of sales by private firms far exceeds that of SOEs, SOEs have dominant positions, particularly in heavy industries (power, steel, chemicals and machinery) located mostly in the non-coastal areas. Moreover, in the area of services (e.g. banking, telecommunications) wholesale distribution and some transport activities, private firms are almost absent.

The vulnerability of SOEs

The reduction in the share of SOEs in production and employment has taken place as a result of a programme of enterprise reform which began in 1983 and intensified since 1994. Nevertheless, most of them will remain vulnerable after the accession. Despite protection, some SOEs make losses. Even those that do not make losses presently, they will become subject to competitive pressure from imports and loss of their privileges. The need for subsidisation of SOEs will increase, while WTO rules involve restriction on subsidies.

Although the Government intended to eliminate losses of SOEs by 2001, the process is very slow and this objective seemed very ambitious and SOEs still remain vulnerable. Table 7 provides data on losses and subsidies provided to industrial SOEs for which information is available. Accordingly, losses of SOEs as a percentage of GDP have declined between 1993 and 1997, but such decline seems to be due to the decrease in the share of their value add in GDP. Otherwise, their losses as a percentage of their value added in fact, increased over the same period. Subsidies provided by the Government to SOEs have declined both in absolute terms and in relation to GDP,[23] and value added produced by SOEs. Nevertheless, this was partly compensated by the relative increase in borrowings of the SOEs from the banking system.

China presently provides numerous types of direct and indirect subsidies both through central and local governments. Unfortunately, quantitative figures for subsidies paid to individual industries are not available even for direct subsidies let alone indirect ones. The available data on the subsidies paid to loss making SOEs are shown in table 8. Accordingly, judged by the amount of subsidies

[22] China's *Statistical Year Book*, 2000, table 5-10.

[23] Note that when working capital injections and R&D expenditures financed by Government are added, the share of subsidies to GDP increases to 3 (J.P. Morgan, *op.cit*., p.13).

paid by the central Government, such labour intensive industries as textiles, coal and tobacco are among the main recipients of subsidies. Some other industries such as automobile which involves a lot of labour (see UNCTAD, 2002, Box 5.1, p.150), also are recipients of priority treatments in obtaining loans, foreign currency subject to export performance and preferential tariffs subjects to localization of the industry i.e. increase in the share of domestic production of parts and components in finished goods.

The degree of profitability of profit making SOEs as a whole has also declined. When measured against value of their fixed assets the profitability of SOEs, in contrast to that of Town and Village Enterprises, has declined continuously. During 1990 – 97 the corresponding ratio for SOE declined from 10.23 to 1.12 per cent while that of town and village enterprises increased from 17.01 to 19.6 (Choe and Yin, 2000, table 3).

Reform of the SOEs towards enterprises operating on commercial principles will be a slow process for two main reasons. First, SOEs suffer from some structural and institutional rigidities inherited from the socialist system. These include, for example, high degree and rigid pattern of horizontal and vertical integration, social obligations, and distribution of plants over various regions with less-than-efficient scale, yet low capacity utilization (See UNCTAD, 2002, Box 5.1) for the case of automobile. Since 1995, Angang Iron and Steel Company has cut 30,000 jobs; but it still employs 165,000 workers. Despite the lay-offs, the labour productivity in the company is six times less than the labour productivity in "Posco" of Republic of Korea (Powell, 2001, p.51).

Secondly, regional governments have some autonomy in decision-making and may not always easily implement wishes of the Central Government for reform and liberalization. Some even have argued that "the interest groups and those industries that used to be heavily protected by the Government such as telecommunications, banking and automobiles will not give up their influence and power easily".[24] Therefore, the pace of internal reform is bound to be slower than the pace of trade liberalization due to the commitments under the accession many of which would come to effect immediately. The domestic industries suddenly become subject to more competition by imports and aggravate the unemployment problems. In other words, there is a dilemma. To compete with the increased flow of imports due to the accession, SOEs ought to become efficient as quickly as possible to prevent bankruptcies and/or unemployment. On the other hand, the prospect for a big bang reform is not promising, as it will suddenly lead even to more output reduction and unemployment as is indicated by the experience of USSR and transitional

[24] Zhang, *et al*, 1998, p.4.

countries of Eastern Europe. By contrast, the experience of China itself indicates that gradual reform has contributed to output growth (Li, 1999).

The consequences of reform of public enterprises for future employment

Enterprise reforms had a significant adverse effects not only on the magnitude of unemployment, as mentioned before but also on the structure of unemployed workforce in terms of labour mobility, and its burden on public enterprises. These effects make further reform through lay-offs after the accession more difficult for a number of reasons. First, the structure of workers laid off is such that they are not necessarily mobile thus they contribute to structural unemployment. The bulk of people laid off constitute middle aged and older with low educational level. Their low educational level and age are inhibiting factors for shifting to new jobs, when available.

Second, lay-offs are concentrated in the non-coastal areas where income level is significantly lower and unemployment is higher than coastal areas. Most export-oriented activities are located in coastal and northern regions as, *inter alias*, attracted more FDI because of their relative prosperity and more developed infrastructure (Cerra *et al*, 1999). Historically, heavy machine building and other industries such as textiles, armaments and chemical engineering were located in the hinterland for military and security reasons. These industries are highly protected and use old technology and production facilities, which are being modernized with large-scale lay-offs (Bhalla and Qui, 2002). This process of technological modernization will become much more rapid after the accession. Therefore, unemployment situation may further deteriorate in hinterland relative to coastal regions.

Third, although the laid-off workers do not contribute to production, they remain on the pay list of SOEs for some time, continue to be paid a partial salary or allowances during a specified period during which they are encouraged to look for alternative jobs. There were about 5.6 million such workers in 1995 whose number increased to 16 million in 1998 (Bhalla and Qui 2002).

Finally, the reform is incomplete. According to J.P. Morgan (1999.b), about 35 million, 17 *per cent* of the urban work force are redundant. In the rural areas about 130 million workers were estimated to be redundant (Bhalla and Qui, 2002). According to Mr. Z. Rangi, further reform of SOEs requires reducing employment in these enterprises by two-third (Powell, 2001, p.49) i.e. over 50 million. According to Morgan Stanley number of additional unemployment caused by the accession will reach 25 million over the "next four years" (2001-2006) (*Ibid*). Salomon Smith Barney, the investment bank, estimates that

within five years after the WTO entry, China will have 40 million people unemployed, 5-10 million rural workers, 10 million laid-off SOE workers, and 20 million non-SOE workers (*Far East Economic Review*, 5 October 2000). In short, bearing in mind the consequences of enterprise reform, during the decade before the accession for the magnitude and structure of unemployment and its financial burden on SOEs, a significant additional unemployment caused by the accession would not be socially tolerated.

The sectoral impact

The sectoral impact of the accession will have an adverse effect on overall employment at least for some time. Even if one assumes that international demand will be sufficient to absorb expansion of exports, labour is not perfectly mobile between sectors and industries as mentioned earlier. Moreover, even if eventually a complete shift of output and employment takes place from import-competing sectors to exportable, it will take time. In other words, while the positive effects (assuming that liberalization will improve incentive for exportation) of the accession on employment would be felt in latter years due to various lags involved, its negative effects will be felt in early years due to immediate impact of the accession on imports.

The short- and medium-term impact of the accession will be felt more severely in activities which employ a large number of workers and become subject to trade liberalization through trade measures, subsidies, etc. Agricultural products and industries with high employment and high rate of protection are among the worse hit by the change of tariff and non-tariff barriers to trade, subsidies and other WTO regulations.

When protected industries become subject to sudden trade liberalization, they cannot withstand the competitive pressure of imports particularly if they had enjoyed high rates of protection and/or subsidies before the liberalization. If they also employ a lot of people a large number of workers have to be laid-off. The experience of 1980s and 1990s in Latin America and Africa shows that trade liberalization was followed by high unemployment rate. For example, in the case of Latin America some shifts took place from import-competing industries to resource-based industries for exports but labour intensive industries suffered (Benevente, etal, 1997).

As shown earlier (Section 3) agricultural products and a number of light industries will be the ones most severely affected by tariff reduction after the accession and SOEs and agricultural products will be the one most adversely affected by subsidy reduction. With respect to SOEs, the available data indicates that eight industries (machinery, smelting and processing of metals,

textiles, chemicals and chemical fibres, transport equipment, non-metal mineral products, food processing and electric machinery and equipment) are, in order of importance, industries with the highest number of employees engaged in SOEs. These industries together account for 72.5 *per cent* (out of over 16.6 million) of the workforce employed by SOEs[25].

Unfortunately comprehensive sectoral data on tariff rates according to ISIC are not available for these sectors. Scanty available data are shown in table 9. The criteria used in choosing the industries for inclusion in the table are that import/output ratio is less or around the average for the economy and the industry concerned is, relatively speaking, highly protected and/or is to be significantly liberalized due to the accession. The table indicates firstly that, except for beverages and tobacco products, most of industries included in table are the same as aforementioned industries where SOEs engage large number of workers. Secondly, although machinery and equipment is not highly protected and does not show low import/output ratio, (the country has limited production capacity in machinery as it does not have comparative advantage in it) will be subject to significant liberalization during early years of the accession. Thirdly, as China is both exporter and importer of textiles in a significant way, import/output ratio for textiles is relatively high, yet it is highly protected, SOEs involved are making losses (see UNCTAD, 2002, Box 5.2) and the industry is subject to significant liberalization. In recent years the textiles import/export ratio has risen in China despite its high protection rate. Hence, the sector is vulnerable to competitive pressure from imports (*Loc.cit*). In the case of minerals and metals even though the tariff rates are not high, tariff reductions will be important. Automobile industry is another highly vulnerable one to import competition (*Ibid*, Box 5.1). Therefore, all industries shown in table 9 are on the one hand those with high level of employment by SOEs and at the same time subject to significant competitive pressure by imports. It is worth repeating that in addition to tariff reduction SOEs are also subject to further liberalization due to reduction (removal of subsidies and other commitments) made in the Protocol of accession. Moreover, most agricultural products are subject to the same pressure and will lose on output and employment.

Unfortunately, except for tariff changes, commitments made by China for trade liberalization in the draft protocol of accession cannot be quantified easily. To provide some indication on the impact of tariff changes on output, import/output ratios and employment, and the direction of changes at the sectoral level a simulation is made using the data on tariff reductions and GTAP model. Despite its shortcomings mentioned earlier, the model provides some

[25] Based on Bhalla, 2002, which is in turn based on *China's Labour Statistical Yearbook*, 2000.

indications as to the sectors that will lose and gain output and employment due to the accession even though the magnitude of their losses are underestimated and the figures for the gaining sectors may be significantly overestimated. The losses are underestimated because the simulation takes into consideration changes in tariff only disregarding changes due to other commitments made in the Protocol of Agreement. The gain in employment by gaining industries is over-estimated because it is assumed that the losses by losing industries are compensated by the gaining industries through immediate shifts of resources. Such shift is not easy and immediate as explained in Section 4. The results are shown in table 10. The table compares the situation with and without the accession for the year 2005.

The simulation results indicate first of all that five years after the accession (the assumption at the time of calculations was that China would enter WTO in 2000), except for clothing, electric equipment, leather products, animal, animal products, meat and miscellaneous food products, output in all industries/agricultural products would be either adversely affected by the accession or the impact would be negligible (processed rice, chemicals and textiles). In other words, for most products output would be lower with the accession than what would be without the accession. With a couple of exceptions, the import/output ratio would rise significantly implying competitive pressure from imports. The rise in the ratio is particularly important for beverages and tobacco products, most agricultural goods, motor vehicles, textiles, and to some extent machinery. In the particular case of textiles, the impact of the accession on output maybe in fact negative (see UNCTAD, 2002, Box 5.2) even if the simulation results show slight positive growth.

Secondly, most cases of output losses are accompanied with losses of both unskilled and particularly skilled labour. Only in this case of transport equipment, output loss will be accompanied by slight gain on unskilled labour.

Thirdly, industries which are the most severely affected by the loss of employment, are more or less the same industries that involve high employment by SOEs as identified in previous pages.

Finally, even if one accepted the assumption of shift of output and employment from import competing sectors to export sectors and ample market access, the need for export expansion, thus output expansion, in these sectors would be tremendous. This is so bearing in mind that in practice losses of output and employment, thus the need for exports and output expansion in the export sector is considerably underestimated for the reasons given earlier. Such expansion

will have implications for the terms of trade of China as well as its competitors to which we will return in the following section.

6. Implications for China's trade and development strategy

So far, short and medium-term impact of the accession on China's foreign trade and employment has been considered. A related question is: considering the negative short and medium-term impact of the accession on employment, how should China react and in particular what sort of longer-term development strategy should China pursue? There are a number of short-term measures available to China but will not be effective. How about long-term measures?

Short-term measures

One might regard devaluation as an immediate response to offset, partially or fully, the impact of import liberalization. Although devaluation will provide a relief as can be effective to limit imports, it cannot resolve the problem entirely as the cause of the problem is inefficiency of import competing industries. Moreover, the government may be reluctant to resort to devaluation. There is a risk of competitive devaluation by other countries particularly when the world economic situation is not favourable. Therefore, it would be at the cost of the loss of terms of trade not only for China, but also for its competitors. In fact, the stated objective of the Government is to keep the exchange rate stable.[26] There are also certain tools available to China, as a new entrant to WTO, such as "transitional safeguard measure" for restricting imports under certain conditions. Nevertheless, these measures are also of temporary nature for a period of up to 3 years. The conditions for applying such safeguard measures are, moreover, restricted and the measures cannot be applied to imports as a whole, or even to imports of a particular product from all sources (Eglin, 2000, pp. 22-23). As a result, it will not be an effective measure in import restriction and employment protection. Another measure is the use of general safeguard mechanism under GATT (Article XIX). This article applies to restrictions on particular products from all sources through quotas or other mechanisms. According to article 7 of the Agreement on Safeguards, the duration of the application of safeguard measures shall not exceed 4 years; but under exceptional situations, it could be extendable to 8 years. The application of safeguard measures, however, require fulfilment of certain conditions. For example, there is a need for prior investigation to prove that the surge in imports has caused, or threatened to cause, injury to domestic industries. Thus, it will take time to apply this measure and it cannot be efficient in the case of China as

[26] *China.com, op.cit.*

a new entrant to WTO which maybe subject to sudden and significant surge of imports in a large number of products.

As short-run measures are, not effective, in the longer-run, a different strategy is required. Should the Government concentrate further on an export drive policy of expansion of labour-intensive products to create jobs? Such a policy would obviously involve shift of resources, or released resources, from import-competing industries to the export sector and expansion of production capacity in this sector. It will be argued here that for China as a large exporting country, there is a limit on the success of an export drive policy to resolve employment problem for two main reasons: costs related to the "fallacy of composition" and increased vulnerability to external factors. Therefore, the country may have to shift the emphasis on the domestic economy.

The fallacy of composition

With respect to the feasibility of acceleration of exports of labour intensive products to compensate for the fall in output and employment in import competing sectors, even if China had sufficient market access to the world market, one needs to ask whether world demand would be sufficient to absorb China's products without considerably undermining the opportunity for other developing countries export volume and without severe impact on world prices of products concerned. Table 11 provides necessary data for four main export items of China obtained from UNCTAD's simulation. Accordingly, in order to achieve the export growth rates obtained by the simulation results due to tariff cuts alone in two cases, clothing and leather products, the share of China in world exports ought to reach over 35 and 29 *per cent*, respectively in 2005. In fact, the ratio of 35 per cent obtained from UNCTAD simulation is very low in relation to some other estimate. For example, the World Bank's estimate for the corresponding ratio is 47.1 (and the corresponding growth for 1995-2005 is almost 375 *per cent* i.e. an annual simple average of 37.5 *per cent*) [27] (Ianchovichina 2000, tables 6 and 8).

The case of clothing is considered in more details, as an example as it shows the highest ratio. Table 12 provides data on the implications of the China's expansion of exports of clothing for international trade in this product based on UNCTAD's simulation. Accordingly, the simulation results would indicate that China would account for nearly 70 *per cent* of the annual average growth of world exports (1.55 out of 3.01 *per cent*) over 1997-2005 as compared with about 51 *per cent* without the accession and its actual contribution of 29 *per*

[27] The estimate by Wang (2000) for the share of China's in world export of clothing is 40 for 2005 and 44 for 2010.

cent (1.85 out of 6.3) and about 26 *per cent* (0.87 out of 3.4) for the periods 1990-99 and 1995-99, respectively. In other words, the rest of the world should grow only by about one *per cent* annually. As clothing products exported by developed countries are mostly differentiated ones in terms of quality, design and brand, they are less subject to competition by China, which produces mostly standard products. Therefore, the burden of the market share loss would be felt mainly by developing countries.

As other developing countries may try to maintain market share, cutthroat competition, and substantial loss in terms of trade is inevitable related to the "fallacy of composition". The magnitude of the loss is hard to simulate as a lot would depend on the world economic situation, reaction of other countries in their price and exchange rate policies, structure of exports of clothing by China and its similarity to other countries. Nevertheless, it cannot be insignificant. There are in fact, some indications that the export drive policies of China in the latest decade involved some adverse effect on the export price and net barter terms of trade of China, particularly for labour intensive products (Zheng, 2000). It should be born in mind also that the actual and potential restrictions on imports of China's products by trade partners included in the China's protocol of accession, particularly for textiles and clothing, will be a limiting factor on expansion of China's exports for years to come (see Section 3).

Vulnerability

With respect to vulnerability, according to UNCTAD simulation if ample market access were available and the export sector were to compensate for the loss of employment in the import competing activities due to tariff reduction alone, the export (goods and services)/GDP ratio would increase substantially by an additional 4.4 *per cent* in 2005. Applying the figures on change in the ratio without and with accession in 2005, as compared with 1997 obtained from the simulation model to actual ratio in 1997, would lead to export/GDP ratio of about 41.5 *per cent* in 2005. Such ratio is nearly twice greater than the average for the world.

The magnitude of this ratio becomes more meaningful if one considers the change in structure of exports. Already without the accession the growth rate in labour intensive items would be significant while a number of resource-based items would show negative growth over 1997-2005. The accession will further result in concentration in a few items. For example, according to table 11, four items (clothing, textiles, leather products and electric goods) together will account for nearly 43 *per cent* of merchandise exports. Moreover, for two of these items exports/output ratio will reach almost 80 *per cent* and 77 *per cent* for another one over 70 *per cent.* Therefore, the combination of high

export/GDP ratio and intensification of concentration in a few main items is bound to increase the country's vulnerability to external factors.

In short, there is a limit in increases in reliance on exports of labour intensive products by China for creation of employment. Apart from increases in vulnerability of the country to external forces due to high export/GDP ratio and concentration on a narrow range of products, there is a great risk of the loss in its terms of trade. Large countries usually rely more on interregional trade within the country than on international trade. After all the USA, the most open (in terms of trade control measures) large industrial economy shows export/GDP ratio of 12 *per cent* for 1998. China is a low-income country. For a given X/GDP ratio the lower the level of development, the greater the capacity of the country to take external risks.

Lower reliance on exports, implies the need for greater emphasis given to domestic economy. In fact, it appears that the Government is determined to stimulate domestic demand and targeting high rates of growth of GDP even if export growth slows down. According to the Development Planning Commission, China is aiming at an average annual GDP growth of 9 *per cent* over 2001-2005.[28] The Government is to stimulate demand through an active fiscal policy, expand investment in agriculture, construction projects, infrastructural projects including pipelines, power production and transmission, roads, bridges, transportation networks, environment protection and sport facilities.[29]

7. Conclusions

China's accession to WTO can have significant implications not only for China's economy, but also for its competitors and trade partners as it accounts for nearly 4 *per cent* of world exports and 3.5 *per cent* of world imports. The entry to WTO may have positive effects on the economy of China, in the long run. Nevertheless, during the early years of the accession China may face significant challenges particularly in the area of employment. The accession will provide China with security of market access, particularly that it does not have to renew its trade agreement with its trade main partner, the USA, annually. Nevertheless, China gains little extra market access until the year 2005 when the Agreement on Textiles and Clothing is fully implemented. Moreover, China's market access in general will be limited for a number of

[28] *China.com*, "Beijing plans 9 *per cent* GDP growth rate next five years" and "China outlines economic targets for 2001".
[29] *Ibid* and *Bloomberg.com*, *"China Economy Grew 7.8 per cent in 2nd Quarter From Year Ago*, 17.07.2001.

years because of various "anti-disruption safeguard measures" included in the protocol of accession. By contrast, it has made extensive commitment to liberalize imports upon the accession, or in early years after the accession particularly for agricultural products and several highly protected industries where labour employment is high and inefficient SOEs still dominate. The industries involved are vulnerable to competitive pressure from surge in import. They include for example, automotive industries, metal products, transport equipment and some machinery and chemical products and to some extent textiles.

China enters WTO and the midst of reforming its SOEs. It is estimated that SOEs account for 54 *per cent* of employed work force engaged in the industrial sector and about 30 *per cent* of these workers are redundant. Although there was rapid growth of employment by the private enterprises during 1990s, they could not compensate for the reduction in the number of labour force by the SOEs and collective Enterprises engaged in the manufacturing sector. As a result, the reform has resulted in an increase in unemployment – which according to unofficial estimates is at least about 8 *per cent* in urban areas. Yet about two-third of employees of the SOEs are redundant and hidden unemployment in the agricultural sector amounts to 173 millions.

According to our simulation, even if assuming for simplicity, but wrongly, that resources can shift smoothly and immediately to the export sector, tariff reduction alone, let alone other liberalization measures, would require nearly 25 per cent increase in total exports and over 3 per cent increase in GDP in 2005 in order to offset the negative impact of the accession on employment in the import-competing sectors. The impact of tariff reduction on output and employment would be negative almost for all industries and agricultural products, except for wearing apparel, electric equipment, leather products, animal and animal products and processed rice. Some of those industries/products, particularly automobile, beverages, vegetable oil and fats, textiles, diary products, would be subject to a jump in their import-output ratio. As adjustment and sectoral shifts cannot, however, take place immediately and smoothly, it is estimated that by 2005 an additional 25 to 50 million workers will be unemployed due to the accession.

What would be the implication for China and its competitors, if the Government aims at a development strategy emphasizing further acceleration of exports of labour intensive products in order to resolve unemployment problem? It was shown that, for China as a large exporting country, there are limits on further expansion of exports of labour intensive products for two main reasons. First, such a strategy would contribute to substantial increase in country's vulnerability to external factors. For example, the simulation results would

imply that to shift resources from the import competing industries to the export sector fully, the export/GDP ratio ought to reach 42 per cent in 2005; that for example exports would be concentrated on a few items; that four products (clothing, textiles, leather products and electronic goods) would account for over 40 per cent of merchandized export of the country; that three of these products would show export-output ration of 70 to 79 per cent.

Secondly, the required export expansion would not be feasible without undermining international market prices and the loss of terms of trade for China as well as its competitors. For example, China's share in world exports of clothing and leather products ought to reach conservative estimates of 35 per cent and 29 per cent, respectively, in 2005. In the particular case of clothing, this would imply that the rest of the world, particularly developing countries, could hardly expand their exports. If they try to maintain their market share, the price could collapse. Therefore, it was suggested that China may consider greater reliance on domestic market in the future, in its development strategy.

Finally, the possibility of high rate of unemployment and the risk of social tension may lead to the slowing down of the process of economic reform, transformation to market economy, and of course the related issue of political reform.

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Table 1

Evolution of International Trade of China (1990-2000)

	Exports			Imports		
	1990	1999	2000	1990	1999	2000[a]
Goods						
Value ($billions)	62	195	249	53	166	225
Share in World (%)	1.78	3.47	3.94	1.48	2.86	3.5
Growth rates:						
1990-1999		14.6			12.6	
1999-2000[b]		27.8			35.8	
Services						
Value ($billions)	5.8	23.7	27.2	4.1	30.7	35.6
Share in World (%)	0.7	1.6	1.8	0.5	2.1	2.3
Growth rates:						
1990-1999		17			25	
1999-2000[b]		15.2			15.8	

Source: Based on UNCTAD, Time Series Database and WTO sources.

[a] Estimates based on WTO figures

[b] Provisional

Table 2

Change in Structure of chinese trade (1987-1999)[a] (%)

Items	SITC	Exports		Imports	
		1987	1999	1987	1999
Food	0+1+22+4	14.59	6.01	7.34	4.03
Agriculture raw material	2-(22+27+28)	5.91	1.26	6.26	4.18
Fuels	3	11.52	2.39	1.25	5.43
Ores and metals	27+28+68	3.13	1.96	2.98	5.30
Non-ferrous metal	68	1.49	1.41	1.70	2.85
Manufactured goods of which:	5 to 8-68	58.14	88.28	81.73	80.20
Chemicals	5	5.70	5.25	11.61	14.30
Machinery and equipment	7	9.36	30.14	38.58	41.89
Other manufactures	6+8-68	43.08	52.90	31.54	24.02

Source: UNCTAD COMTRADE database, SITC Rev. 2

[a] Excludes unclassified products

Table 3

Changes in Weighted Tariff Rates of Main Products of China due to the Accession

	MFN 2001	Bound (final tariff rate)	Reduction %			
			1st year	2nd year	5th year	Final year (bound)
Cereal grains nec	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 nec	21.7	8.4	32.5	46.8	61.2	61.2
Plant-based fibers	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
Textiles	20.5	9.4	22.9	36.4	57.4	54.1
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 nec	13.4	6.6	37.0	45.7	50.7	50.7
Meat products nec	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 nec	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 nec	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: cattle, sheep, goats, horse	14.1	9.9	17.4	23.6	29.9	29.9
Transport equipment nec	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 nec	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 nec	19.5	15.8	7.2	11.9	19.0	19.0
Animal products nec	9.4	8.0	9.3	11.9	14.5	14.5
Average[a] of above	14.6	6.1	40.5	47.2	54.3	58.0
All goods	13.7	5.7	41.6	48.0	54.9	58.4

Source: UNCTAD , TRAINS Database, based on WTO figures

nec(s): not classified (specified) elsewhere

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

Table 4

Various impacts of the China's accession to WTO due to tariff changes (for 2005)

Variables	The difference With and Without accession
GDP (real 1997 prices): %	2.2
Export volume (real 1997 prices): %	13.5
Import volume (real 1997 prices): %	24.6
Trade balance (current US$ billion)	-35.7
Term of trade (%)	-1.2
GDP deflator (%)	-3.4
Exports/GDP ratio (%)	4.4

Source: Author's calculation based on GTAP simulation model applied by UNCTAD.

Table 5

Annual average growth of employment in various sectors of China (1980-99)

	1980-90	1990-99
Agriculture	2.8	-0.9
Manufacturing[a]	3.8	-0.8
Others:	9.2	5.8
Construction	9.3	3.9
Trade	7.6	5.4
Transport & communications	6.8	2.8
Finance, public administration & others	10.3	5.5
Total employed	4.2	1.1
Total labour force	4.15	1.23
Unemployed	0.54	10.5

Source: Bhattasali and Masahiro (2001), Appendix Table 1, based on *China Statistical Yearbook*

[a] Includes manufacturing, mining and public utilities.

Table 6
Number of employees in State-Owned Units by sector at the end of the year
Thousands (1999)

	1990	1995	1999	Change (95-99)	
				No.	%
Farming	7370	6340	5000	-1340	-21.1
Manufacturing	33950	33260	16480	-16780	-50.5
Mining and quarrying	7860	8340	5250	-3090	-37.1
Construction	5380	6050	3990	-2060	-34
Utility	1830	2370	2390	+20	+0.8
Total industry	49020	50920	28080	-22840	-44.8
Total commercial services	17920	20020	14420	5600	-28
Social, public and other services	27220	31870	34760	2890	+86.9
Grand total	103346	108550	83360	-25190	-23.2

Source: *China Statistical Yearbook*, 2000, tables 5-8

Table 7
Loss of Chinese Industrial SOEs and subsidies
provided by the Government

	1993	1995	1997
Shares of SOEs in GDP	47.0	34.0	32.0
Losses: as a share of GDP	1.3	1.1	1.1
as a percentage of value added of SOEs	2.77	3.24	3.44
Subsidies: as a share of GDP	1.2	0.6	0.4
as a share of value added of SOEs	2.55	1.47	1.25

Source: Based on Broadman (2000), tables 3, 5 and 6 Choe and Yin (2000), which are in turn based on *China Statistical Yearbook*; various years.

Table 8

Subsidies paid to SOEs by Central and local Governments

1990, 1995 and 1998 (100 million RMB)

Sector/year	1990	1995	1998
Central Government:	118	46.8	74.7
Metallurgic industry	1.16	3.02	8.36
Ferrous-metal industry	0.63	5.86	4.65
Machinery industry	3.80	8.34	8.38
Coal industry	55.86	12.13	14.85
Oil industry	42.53	0.00	3.28
Chemical industry	3.83	3.47	4.96
Textile industry	1.90	3.38	15.36
Light industry	6.65	1.52	2.35
Tobacco industry	0.00	8.62	8.83
Other sectors	1.65	0.42	3.67
Local Governments	460.87	281.01	258.81
Grand total	578.9	327.8	333.5

Source: Government of China, reported in Annex 5.a of China's protocol of accession to WTO.

Table 9

Import/output ratios, tariff rates before the accession and tariff reduction due to the accession

	Import/output Ratio (1997)	MFN Tariff (2001)	Tariff reduction due to the accession (%)	
			After 5 yrs	After 2 yrs
Beverages & tobacco products	4.6	57.8	81.9	74.2
Food products	9.1	16.8	41.7	34.5
Minerals products nes	5	14.4	20.6	18.2
Ferrous metals	11.6	9.1	42.8	40.5
Metal products	7.3	9.7	23.6	21.2
Metal nes	24	18.6	46.7	37.3
Motor vehicles	15.4	31.3	55	39.4
Wood products	16.9	10	54.1	66
Machinery & equipment ncc	25	13.4	50.7	45.7
Manufactures nes	5.4	19.5	19	11.9
Textiles	22	20.5	54.1	36.4
Chemical, rubber, plastic products	22.9	14.1	42.8	27.6

Source: UNCTAD Secretariat database, and table 3

Table 10
The Impact of Tariffs Reduction as a Result of the Accession to the WTO on Output, Labour and Import/Output Ratio (2005)[a]

Products	Change in Import/Output Ratio	Percentage Change in		
		Output Volume	Labour	
			Unskilled	Skilled
Oil seeds	92.32	-53.46	-60.61	-61.51
Beverages and tobacco products	46.80	-38.70	-35.32	-38.83
Vegetable oils and fats	19.41	-6.49	-4.48	-7.32
Motor vehicles and parts	8.98	-11.07	-8.14	-11.75
Other crops	8.77	-8.81	-12.08	-12.75
Textiles	6.66	2.06	3.71	0.65
Grains, vegetables, fruits	4.87	-4.84	-7.67	-8.32
Dairy products	4.60	-3.79	-1.93	-4.69
Machinery and other manufactures	3.46	-2.13	-0.21	-3.49
Wood products	2.80	-1.46	-0.35	-2.84
Electronic equipment	2.74	14.37	15.49	12.50
Wearing apparel	2.46	22.00	22.56	19.90
Mineral and metal products	1.85	-2.59	-0.53	-3.78
Forestry and fishing	1.81	-0.03	-0.02	-0.53
Processed rice	1.20	0.15	1.82	-0.91
Transport equipment	0.94	-1.49	0.53	-2.97
Coal, Oil, Gas and minerals	0.81	-0.42	-1.52	-2.05
Chemical and petroleum products	0.65	0.46	2.43	-0.66
Services	0.03	1.81	3.86	0.43
Leather products	-0.01	13.72	14.55	11.79
Meat and meat products	-0.26	5.42	6.67	4.11
Animals and animal products	-1.69	6.63	5.26	4.67
Food products nec	-1.98	5.95	7.35	4.79

Source: Simulation results based on UNCTAD Secretariat's calculation using GTAP model

[a] The comparison is between the situation with and without the accession.

Table 11

Simulation results for selected export items of China[a] (%)

	Wearing apparel	Leather products	Electric equipment	Textiles
Increase in export values (1997-2005):				
1. Baseline (without accession)	68	13.7	142.3	18.5
2. With accession	102.7	31.1	148.2	47.3
3. Deviation from baseline (2-1)	34.7	17.4	5.9	28.8
With accession (2005):				
Share in China's merchandise export (%)	11.1	4.9	21.2	5.4
Share of exports in China's output of the product	79	77.6	70.2	21.7
Share in world merchandise exports	34.8	28.8	14.1	12.9

Source: Simulation results and UNCTAD database

[a] This simulation results are based on changes in tariff rates only.

Table 12

Changes in exports and output of wearing apparel of China due to the accession and contribution of China to world exports[a]

	Without Accession	With accession	Difference
Simulations (1997-2005):			
China:			
Output growth rate	6.13	7.85	1.71
Export growth rate	6.70	9.23	2.54
Share in world exports	27.23	34.78	7.56
World: export growth rate	3.01	3.56	0.55
Contribution to world growth rate of exports:[b]			
China	1.55	2.48	0.93
Rest of the world	1.46	1.08	-0.38
	1990-99	1995-99	
Actual growth rates:			
China	13.5	5.7	
World	6.3	3.4	
Developed countries	3.5	1.5	
Contribution to world growth rate:[c]			
China	1.85	0.87	
Rest of the world of which:	4.45	2.53	
Developed countries	1.26	0.51	

Source: Simulation results using GTAP model and Comtrade database.

[a] All growth rates are annual average.

[b] The weight applied is the average shares of the country/region in world exports of the product in 1997 and 2005 as calculated by the model

[c] The weight used is the average share of the country/region in world exports for the period concerned.

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