

Estimating the Effects of China's accession to the World Trade Organisation

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Abstract:

Accession to the World Trade Organization (WTO) marks a new era in China's economic reform. In this new era, state capital will lose its dominance of heavy manufacturing and key services industries, heralding significant productivity gains in these so-called strategic industries. This study uses a computable general equilibrium model of China to estimate the economic benefits from China opening its heavy manufacturing and key services industries to private foreign and domestic capital. To estimate the likely productivity benefits of WTO entry, the study draws on China's experience in the early to mid 1990s when the withdrawal of state capital from light manufacturing industries led to a massive inflow of foreign direct and local investment into these light manufacturing industries. The study anticipates that opening the previously protected heavy manufacturing and key services industries to non-state capital will boost productivity by encouraging new competition and foreign direct investment (FDI) inflows into these industries. As a result of the expected productivity gains in these previously protected strategic industries, this study concludes that WTO accession will not adversely affect production and employment in these industries. This result contrasts with the findings of most general equilibrium analyses of China's WTO entry that focus only on resource reallocation impacts following the removal of tariff and non-tariff barriers. In the long term, productivity gains related to WTO accession should place China in a position to become an important production base for capital-intensive manufactured products as well as light manufacturing.

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Estimating the Effects of China's accession to the World Trade Organisation

1. Background and introduction

China's entry to the World Trade Organisation (WTO) marks the beginning of a new era in China's economic reform process. In the first era, the 1980s, the Chinese Government gradually introduced market practices and prices to a few selected sectors and factor markets. In the second era, the 1990s, the Government let market forces discipline most economic sectors except strategic manufacturing and services industries; these it kept largely under state control along with capital, land and formal urban labour markets.

The major policy shifts of the 1990s opened light manufacturing and services industries like catering, recreation, tourism, construction and retailing to foreign direct investment (FDI). From the early 1990s, this led to a surge in China-inward FDI flows, with Hong Kong and Taiwan clothing and electronics factories establishing themselves along China's eastern coast. The policy change also spurred domestic private investment in liberalised industries. As a result, the non-state sector exposed smaller state-owned enterprises (SOEs) in light manufacturing and selected services industries to intensive competition.

However, in the early 1990s, the dominant position of large manufacturing and services SOEs in industries the central government labelled strategic remained almost untouched (Mai, 2001). These strategic industries include iron and steel, non-ferrous metals, petrochemicals, automobiles, banking, insurance, telecommunications, professional services, wholesale, transport and storage and utilities. The Government protected large SOEs in strategic industries through direct barriers to entry and high tariffs.

The third reform era commenced as China readied itself for WTO entry in the late 1990s. The accession terms of China's WTO entry requires the Government to liberalise substantially FDI into these strategic industries (Mai and Lou 1999 and Mai

2001). China started preparing these sectors for competition long before it confirmed its WTO membership in late 2001. In 1999, after China and the United States completed their bilateral negotiations on China's entry terms, the Government accelerated restructuring SOEs in these previously off limits strategic manufacturing and services industries so they could compete with new foreign and local private entrants on a more equal footing.

In 2000, the Government started significant moves to reform large SOEs. It packaged the best assets of the two largest enterprises, the domestic state owned oil monopolies, into stock companies and partially privatised them via the Hong Kong, London and New York stock markets, (Mai, 2002). This marked the beginning of a wave of partial privatisations of giant SOEs that dominated or monopolised key manufacturing and services industries. In 2001, the Government listed the third oil monopoly overseas. A similar industry wide overhaul is underway in other strategic industries including telecommunications, iron and steel, railways and power generation.

These industry wide reforms combined with WTO-induced legal and regulatory reforms are likely to provide an opportunity for a new surge in FDI into China (Economic Analytical Unit, 2002). While major policy shifts in the early 1990s introduced market competition into light manufacturing and some service industries, the main impact of China's entry into the WTO is likely to be the gradual withdrawal of the state from its dominant position in the strategic manufacturing and service industries. This should see China fully embrace a market system, generating significant productivity and income gains.

Many researchers have used computable general equilibrium (CGE) models to analyse the economic and welfare impacts of China's trade liberalisation and WTO accession. A rich body of literature forecasting the likely impacts of WTO-related reductions in tariffs and non tariff barriers has emerged (Zhai and Li 2000, Li and Lejour 2001, Lejour 2001, Fan and Zheng 2001, Ianchovichina and Martin 2001, Li, Zhai and Liu 2001, Francois and Spinanger 2002).

Anticipating the effects of investment and services-trade liberalisation is a challenge

to policy analysts using quantitative methods, especially CGE modelling. However, it is of central importance in assessing the net welfare impact of China's WTO entry. Merchandise trade liberalisation is likely to generate only a relatively small share of China's WTO entry-related reform benefits. In part this is because China's actually levied tariff rates prior to WTO entry were quite low¹. However, due to the difficulty of estimating tariff equivalents of services trade barriers, most modelling of WTO entry measures only the effects of merchandise trade reform. As discussed above, the most important impact of China's WTO entry is the opening up of strategic industries to foreign and domestic non-state capital; this impact cannot be captured by reductions in import barriers. Hence, CGE modelling of tariff removal cannot effectively estimate benefits from services trade or investment liberalisation, arguably the most important component of China's WTO entry package.

Comment: Mai. we can easily reestimate this for current data, all published. Need to do this as has been a considerable crack down on smuggling and other customs abuses since 1996, as readers will be well aware

This study therefore contributes to the literature by focusing on analysing the productivity and welfare impacts of the investment liberalisation, particularly opening of China's strategic industries to FDI.

The following sections present the methodology used, the major results regarding the impact on China of WTO accession and concluding comments.

2. Methodology

As discussed above, assessing the impact of opening strategic industries to non-state capital and associated externalities is key to analysing the impact of China's WTO entry. A general equilibrium model of China, PRCGEM², adapted to run a recursive dynamic simulation of China's WTO entry, is well suited for such an analysis. (See Appendix A, for a detailed description of the model and its industry structures.)

¹ Actually levied tariffs are measured by the value of tariff revenue collected divided by total value of imports. Although announced tariff rates were much higher, many importers avoided paying tariffs through legal and illegal loopholes, including special economic-zone exemptions, duty drawbacks, joint venture companies, smuggling and abusing the duty drawback scheme.

² PRCGEM was developed jointly by CoPS, Monash University, and IQTE, Chinese Academy of Social Sciences. For more details see Appendix A.

The modelling exercise has two parts. The first part uses the model to simulate changes in the Chinese economy, including measures of sectoral productivity growth, which occurred in the early 1990s when light manufacturing and some services industries, such as catering, retail and entertainment, were opened up to FDI and domestic private capital. In this historical simulation, the model is informed of change to statistically observed variables, such as GDP and industry output. Hence, the model estimates changes in the economy that cannot easily be observed statistically, such as industry wide changes in technology choice and productivity. This innovative way of applying general equilibrium models, developed by Dixon and Rimmer with the MONASH model, provides insights into the productivity improvements associated with China's opening of light industries to FDI in the 1990s (Dixon and Rimmer 2002). The historical simulation also provides useful information about the shift in consumer tastes and industries' efficiency in using intermediate inputs during a recent period of major structural change.

In the second part of the modelling exercise, these estimates of 1990s preference and technological changes are used to simulate the expected impact of opening up strategic industries following China's WTO entry.

2.1 Simulating changes in the Chinese economy in the early 1990s

The historical simulation, which covers the period 1991-96, "reverse engineers" the model to estimate shifts in technology and preferences. Usually endogenous variables of general equilibrium models including output, consumption, trade, and employment are made exogenous and naturally exogenous variables such as technological changes and shifts in consumer tastes are determined endogenously. This simulation estimates coefficients by employing observed historical data between 1991 and 1996 for:

- macroeconomic variables such as real GDP, consumption, investment, imports and exports
- sectoral output, employment, consumption and trade.

The model then computes changes in:

- sectoral rates of return
- primary factor augmented technological change
- efficiency in the use of intermediate inputs
- consumer tastes.

The period of 1991-96 was selected because, following Deng Xiaoping's Southern Tour in the early 1990s, China experienced a surge in FDI in 1992 and 1993 and a consequent boom in economic activity, especially in light manufacturing. However, from 1997, the Asian financial crisis and tightening monetary policy started to slow the economy; SOEs began to experience serious difficulties, triggering further efforts to liberalise the economy through WTO entry.

The data sources for the historical simulation are:

- China statistical yearbook, various issues
- China industrial statistical yearbook, various issues
- China labour statistics yearbook, various issues
- China township enterprises yearbook 1996
- China rural statistical yearbook
- China foreign trade statistical yearbook, various issues
- 1992 and 1997 input-output tables of China.

The historical simulation of the opening up of the light manufacturing industries to FDI and local private capital yielded several interesting results.

- Relatively closed strategic manufacturing and services industries on average experienced less productivity improvement than light manufacturing industries during this period. The historical simulation demonstrates the productivity gains generated by allowing non-state capital, prominently FDI to enter light manufacturing industries. On average, primary-factor augmented productivity in strategic manufacturing industries grew 3.6 percentage points a

year more slowly than in the light manufacturing industries.³ Primary factor augmented productivity in the services sector improved 5.4 percentage points a year more slowly than in manufacturing industries (Table 1).

- From the 1990s, as Chinese production became more sophisticated, industries used less cotton textiles, wool textiles and electricity per unit of output and more motor vehicles, communication, insurance and finance per unit of output (Table 2)⁴
- Consumer tastes shifted in favour of higher value food products (such as fish and meat products) as well as clothing, motor vehicles, communication, education, insurance and tourism related services and shifted against coal (Table 3).
- Because they are less open to non-state investment and competition, strategic manufacturing and services industries achieved higher profit growth than light manufacturing industries during this period. Hence, once liberalised, these previously protected sectors should attract considerable capital inflows. On average, rates of return of the strategic manufacturing industries grew 1.3 percentage points faster than light manufacturing's profits. The rates of return of Services industry grew 5.8 percentage points faster than manufacturing industry profits, reflecting the greater barriers to entering services compared to manufacturing.

2.2 Simulating the effects of China's WTO entry

To compute the impact of China's WTO entry, the variables' endogenous and exogenous classifications are swapped back to a conventional policy closure. Hence, variables such as output and consumption are endogenous and variables such as

³ Primary factor augmented productivity improves when less primary factor units are required to produce a unit of output.

⁴ The clothing industry also moved away from cotton and wool textiles and into silk and synthetic textiles as it became more export oriented.

technological changes are exogenous. The model thus computes changes in GDP, sectoral output and consumption in response to exogenous shocks.

To simulate the effects of China's WTO entry, we assume:

- capital will flow into strategic manufacturing and service industries until these industries' rates of return converge with profit rates in light and overall manufacturing industries respectively.
- Rates of productivity growth in the strategic manufacturing and services industries will catch up with overall manufacturing industry averages respectively.

The modelling assumes the policy of liberalising strategic industries started in 2001 and will be complete by 2010. The sizes of the expected shocks to strategic manufacturing industries from WTO entry are derived from the historically revealed gaps in productivity growth and profit rates between strategic manufacturing industries and light manufacturing industries and between services industries and total manufacturing.

2.3 Baseline simulation: a reference case

The policy simulation provides expected percentage changes in economic indicators following China's WTO entry. Baseline simulation of the Chinese economy to 2010 provides a benchmark against which changes due to WTO entry are compared. For example, if we assume in the baseline China's GDP will grow at 7.6 per cent a year during 2000-2010 without WTO entry, GDP would grow from US\$1,077 billion in 2000 to US\$2,240 billion in 2010, in 2000 dollars. Then a WTO entry induced increase in real GDP of 10 per cent by 2010 would boost real GDP by US\$224 billion in 2000 dollars.

In the baseline simulation, forecasts for macroeconomic indicators, growth in real GDP, consumption, investment, employment, exports and imports by specialist external forecasting agencies including the World Bank, Economist Intelligence Unit, and Chinese Academy of Social Sciences are incorporated into the model. The model

is then used to project growth of different industries. The model also incorporates trend changes in technology and consumer tastes obtained from the historical simulation into the baseline simulation.

The baseline projections anticipate a more rapid growth in manufacturing output and services than in agricultural and mining, thereby continuing China's structural movement away from agriculture and mining into manufacturing and services (Table 4). Furthermore, services industry growth should be nearly as rapid as manufacturing growth (Table 4). This contrasts with the 1990s, when the service sector grew much more slowly than the manufacturing sector.

3. Effects of WTO entry

The policy simulations find WTO entry will be welfare enhancing, boosting incomes and encouraging the economy to move into higher value-added activities (Tables 5 to 7).

3.1 Higher GDP

China's WTO entry is expected to boost all macroeconomic variables (Table 5). Liberalising strategic industries should raise average annual real GDP growth by 1.1 percentage points during 2000-2010 (column one). After completing strategic industry reforms in 2010, real GDP should be 10.7 per cent larger than without WTO reforms.

Higher capital stock and productivity growth together explain this real GDP boost post WTO entry. By opening its strategic industries, China will attract new capital investment into these sectors, lifting annual capital stock growth rates 0.9 percentage points above baseline levels. More rapid productivity growth in liberalised industries also should boost real GDP.

3.2 Output of all industries expands

By boosting productivity and reducing capital costs, increased capital inflows into the liberalised intermediate, capital goods and infrastructure service industries will lower

production costs. This will cause the output of strategic industries to expand and the prices of their products to fall, boosting real GDP above the baseline projection, benefiting the whole economy. Higher incomes will expand demand for consumer goods oriented manufacturing and services industries, previously labelled non-strategic. Non-strategic industries also will benefit from lower intermediate input, capital goods and infrastructural service costs. The output of all sectors will therefore expand as a result of WTO induced strategic industries reforms (Table 6).

3.3 WTO entry encourages upgrading to higher value added activities

Like many newly industrialised Asian economies in their earlier stage of economic development, in the past couple of decades, labour intensive manufacturing drove China's economic growth. Since the 1980s, successful upgrading into higher value added activities has become a major concern for the Republic of Korea, Taiwan, Hong Kong and Singapore. More recently upgrading also has become important for more developed coastal cities in China, whose wage rates are pricing them out of some labour intensive activities. This study anticipates WTO entry will encourage China to upgrade into higher value added activities and tracks this process.

The modelling finds that, as a result of the opening up of the strategic industries, the output of China's higher value-added strategic industries will expand more rapidly than light manufacturing industries (Table 6). This is because the policy reform for the WTO entry, i.e., the opening up of the strategic industries, allows the strategic industries to catch up with the productivity growth of the light manufacturing industries that has been liberalised before. China is therefore likely to see a period of faster productivity growth in the strategic industries than in the light manufacturing industries due to the policy change. As the strategic industries in China become more competitive due to the faster productivity growth, the net exports of the higher value added products (such as motor vehicles and iron and steel) is likely to grow faster than the net exports of the light manufacturing products (such as clothing) (Table 7).

3.4 Consumption

The modelling anticipates in the next decade liberalising strategic industries will boost average annual consumption growth by 1 percentage point above the baseline scenario. Anticipated shifts in consumer tastes should expand demand for manufacturing and services products compared to agricultural products. Increasing consumer income following WTO entry will be allocated more to services, other food and clothing rather than basic consumption items such as grain and coal. The most rapid increase in demand will be for services including telecommunications, education and insurance (Table 6).

4. Concluding comments

Many computable general equilibrium studies estimating the effects of China's WTO accession focus on the effects of lowering tariff and non-tariff barriers. Consequently, these studies conclude automobile and other heavy industry output will contract following China's WTO accession (Zhai and Li, 2000, Fan and Zheng 2001 and Francois and Spinanger, 2002). However, by also modelling the impact of opening strategic industries to foreign and domestic private investment, this study concludes China's strategic manufacturing industries should thrive following WTO accession. Liberalising entry to strategic industries will improve their productivity and their relatively high profit rates should draw in capital, reducing their capital costs and shifting out their supply curves. The income growth from WTO accession induced productivity boost also should shift out the demand curve for these sectors' products, as well as light manufacturing, services and to a lesser extent agricultural products. Hence, in the medium to long term these strategic industries should expand following WTO accession.

Within China, some commentators are concerned that, even though strategic industry productivity and output could benefit from WTO accession, the Government inevitably will own a shrinking share of these industries. However, the Chinese Government now is convinced that owning a part of a growing pie is better than owning all of a shrinking pie. Inefficient SOEs draining resources through the

banking system have become a critical hurdle to China's economic development (Economic Analytical Unit, 2002). The recent lessons of the Asian financial crisis also indicate weak banks and corporates can crucially weaken and expose whole economies. This hurdle only can be overcome by pushing China's economic reform process further, including by liberalising entry to strategic industries, so as to fully embrace a market system. Hence, reforming these previously closed strategic industries will be a major benefit of WTO accession.

Appendix A The PRCGEM Model

PRCGEM is an applied general equilibrium model of the Chinese economy, developed jointly by the Centre of Policy Studies, Monash University, and the Institute of Quantitative and Technical Economics at the Chinese Academy of Social Sciences (For details see Zheng and Fan, 1999, or Adams et al., 2000). The model distinguishes 118 industries or sectors, but a more aggregated version of PRCGEM is used in this study. (See the 33 industry aggregation in Appendix Table A.1.)

The theoretical structure of PRCGEM follows the Australian ORANI-F model, (Horridge et al., 1993). Its main assumptions are listed below.

- Producers:
 - operate in single product industries
 - are price takers and cost minimisers
 - and their behaviour can be characterised by nested Leontief/CES production functions, that allow substitution between domestic and imported sources of produced inputs and between labour, capital and land.
- Investors:
 - create capital goods from domestic and imported commodities
 - are price takers and cost minimisers
 - operate production functions that can substitute between imported and domestic inputs
- Households:
 - are disaggregated into “peasant” and “non-peasant”
 - spend on aggregate in proportional to GDP
 - operate utility functions allowing substitution between commodities, LES, and domestic and imported sources.

- International exports:
 - can be characterised by a CET specification of imperfect transformation in production between two versions of each domestically produced good: one for domestic consumption, one for export.
 - operate on downward sloping demand curves for individual exports.
- Government:
 - consumption moves in line with aggregate household income
- Prices:
 - have basic values determined only by input prices due to zero pure profit conditions and constant returns to scale
 - paid by purchasers are the sum of basic values and sales taxes
 - are money neutral, depending only on relative prices, so one price, often the exchange rate, must be taken as an exogenous numeraire.
- Markets
 - for commodities clear
 - but labour markets need not clear.

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Appendix Table A.1

33-industry aggregation of PRCGEM

Sectors modelled in historical and policy simulations

| | Industries |
|----|----------------------------|
| 1 | Grains |
| 2 | Other crops |
| 3 | Livestock |
| 4 | Other agriculture |
| 5 | Coal |
| 6 | Natural gas |
| 7 | Ferrous metal ore |
| 8 | Non-ferrous metal ore |
| 9 | Other mining |
| 10 | Egg and dairy products |
| 11 | Sugar refining |
| 12 | Wines |
| 13 | Other food products |
| 14 | Cotton textile |
| 15 | Wool textile |
| 16 | Clothing |
| 17 | Motor vehicles and parts |
| 18 | Iron and steel |
| 19 | Non-ferrous metal products |
| 20 | Other manufacturing |
| 21 | Electricity |
| 22 | Other infrastructure |
| 23 | Construction |
| 24 | Communication |
| 25 | Wholesale |
| 26 | Retail |
| 27 | Transport |
| 28 | Health |
| 29 | Education |
| 30 | Finance |
| 31 | Insurance |
| 32 | Tourism related industries |
| 33 | Other services |

Note: Tourism related industries include hotels and restaurants, entertainment, personal services, and air and rail passenger transportation. The transport industry excludes air and rail passenger transport.

Table 1

Primary factor augmented productivity change by groups of industries

Annual percentage change 1991-96

| Industries | Rates of changes in productivity % |
|--------------------------------------|------------------------------------|
| Agriculture | 6.2 |
| Mining | 2.1 |
| Manufacturing | 8.3 |
| Light manufacturing industries | 10.1 |
| “strategic” manufacturing industries | 6.5 |
| Services | 2.9 |

Source: Historical simulation.

Table 2

Changes in intermediate input-using technology

Annual percentage change, 1991-96

| Commodities | Rates of technological change % |
|-----------------|---------------------------------|
| Cotton textiles | -1.2 |
| Wool textiles | -1.0 |
| Motor vehicles | 0.2 |
| Communication | 6.4 |
| Insurance | 3.0 |
| Finance | 1.8 |
| Electricity | -1.6 |

Note: A positive (negative) number in this table indicates that technological change is commodity-using (saving). For example, the number in the fourth row indicates that in each year industries increased their usage of communication services by 6.4 per cent more than their outputs.

Source: Historical simulation.

Table 3

Shifts in consumer tastes

Annual percentage change 1991-96

| Commodities | Shifts in consumer tastes % |
|--------------------------|-----------------------------|
| Coal | -3.2 |
| Other food products | 0.8 |
| Clothing | 1.1 |
| Motor vehicles | 1.6 |
| Communication | 1.9 |
| Education | 1.5 |
| Insurance | 1.4 |
| Tourism related services | 2.2 |

Note: A positive, negative, number in this table indicates the consumption of the particular commodity grows faster, slower, than the rate caused by changes in income and relative prices. For example, the number in the fifth row shows that each year consumption of communication increases at a rate 1.9 per cent faster than can be explained on the basis of changes in prices and changes in the average budget of households.

Source: Historical simulation.

Table 4

Baseline projections of China's economic performance

**Macroeconomic indicators and output of aggregated sectors, without
WTO entry**

| | Average annual growth 2000-2010 Per cent |
|------------------------------|---|
| GDP | 7.6 |
| Consumption | 6.0 |
| Investment | 10.3 |
| Exports | 10.4 |
| Imports | 11.0 |
| | |
| Output of aggregated sectors | |
| Agriculture | 3.0 |
| Mining | 6.0 |
| Manufacturing | 8.7 |
| Construction | 10.4 |
| Services | 8.3 |

Source: baseline simulation.

Table 5

Modeled macroeconomic impacts of China's WTO entry

Macroeconomic indicators and output of aggregated sectors

| | Changes in average annual growth rates | Percentage deviation from baseline by 2010 |
|------------------------------|---|---|
| | Per cent | Per cent |
| GDP | 1.1 | 10.7 |
| Consumption | 1.1 | 10.7 |
| Investment | 1.2 | 11.6 |
| Exports | 1.2 | 11.2 |
| Imports | 1.3 | 12.0 |
| Output of aggregated sectors | | |
| Agriculture | 0.3 | 2.7 |
| Mining | 0.8 | 7.9 |
| Manufacturing | 1.4 | 13.2 |
| Construction | 1.2 | 11.7 |
| Services | 1.4 | 13.2 |

Source: Policy simulation.

Table 6

The effects of China's entry to the WTO

Output, consumption and intermediate demand by commodity, per cent

| | Changes in the average annual growth rates of value added by commodity | Percentage deviation of value added by commodity from baseline by 2010 | Percentage deviation of consumption by commodity from baseline by 2010 | Percentage deviation of intermediate demand by commodity from baseline by 2010 |
|----------------------------|--|--|--|--|
| Grains | 0.3 | 2.6 | 0.4 | 6.8 |
| Other crops | 0.3 | 2.9 | -0.4 | 6.7 |
| Livestock | 0.2 | 2.4 | -0.6 | 5.1 |
| Other agriculture | 0.3 | 2.9 | -0.4 | 6.2 |
| Coal | 1.1 | 10.5 | -4.7 | 12.5 |
| Natural gas | 0.6 | 6.2 | 7.8 | 12.6 |
| Ferrous metal ore | 0.6 | 5.8 | 0.0 | 16.1 |
| Non-ferrous metal ore | 0.8 | 7.3 | 0.0 | 15.2 |
| Other mining | 0.7 | 6.4 | 0.0 | 13.9 |
| Egg and dairy products | 0.6 | 5.4 | 5.2 | 8.7 |
| Sugar refining | 0.1 | 0.8 | 6.2 | 7.7 |
| Wines | 1.3 | 12.5 | 12.5 | 14.0 |
| Other food products | 0.9 | 9.1 | 7.3 | 9.2 |
| Cotton textile | 0.6 | 6.0 | 10.9 | 8.1 |
| Wool textile | 0.7 | 6.3 | 9.1 | 7.5 |
| Clothing | 0.5 | 5.0 | 12.7 | 12.6 |
| Motor vehicles and parts | 1.9 | 19.1 | 17.9 | 16.5 |
| Iron and steel | 1.8 | 17.5 | 0.0 | 15.6 |
| Non-ferrous metal products | 1.7 | 16.4 | 0.0 | 15.5 |
| Other manufacturing | 1.4 | 13.9 | 14.3 | 13.4 |
| Electricity | 1.3 | 12.9 | 10.7 | 13.3 |
| Other infrastructure | 1.2 | 12.1 | 5.8 | 13.7 |
| Construction | 1.2 | 11.7 | 0.0 | 13.9 |
| Communication | 1.6 | 15.4 | 48.8 | 13.9 |
| Wholesale | 2.3 | 23.0 | 37.1 | 14.3 |
| Retail | 1.5 | 15.2 | 30.5 | 13.1 |
| Transport | 1.4 | 13.8 | 19.4 | 13.8 |
| Health | 1.9 | 19.6 | 22.3 | 13.3 |
| Education | 1.5 | 15.4 | 23.5 | 13.8 |
| Finance | 1.5 | 14.4 | 0.0 | 14.3 |
| Insurance | 1.8 | 17.7 | 35.4 | 14.4 |
| Tourism related industries | 1.5 | 14.8 | 13.2 | 13.7 |
| Other services | 1.2 | 11.7 | 12.0 | 13.6 |

Source: Policy simulation.

Table 7

The effects of China's entry to the WTO

Percentage deviation from baseline by 2010, per cent

| | Imports | Exports |
|----------------------------|---------|---------|
| Grains | 37.3 | -22.0 |
| Other crops | 37.8 | -21.9 |
| Livestock | 37.2 | -22.6 |
| Other agriculture | 43.4 | -21.8 |
| Coal | 68.3 | -27.6 |
| Natural gas | 26.8 | -2.9 |
| Ferrous metal ore | 28.3 | -13.4 |
| Non-ferrous metal ore | 58.9 | -25.4 |
| Other mining | 22.3 | -7.3 |
| Egg and dairy products | 24.0 | -11.1 |
| Sugar refining | 23.6 | -14.4 |
| Wines | 18.1 | 2.9 |
| Other food products | 23.4 | -10.9 |
| Cotton textile | 11.4 | -0.9 |
| Wool textile | 13.3 | -1.0 |
| Clothing | 14.5 | 0.7 |
| Motor vehicles and parts | 0.1 | 30.6 |
| Iron and steel | 1.9 | 25.7 |
| Non-ferrous metal products | 11.3 | 14.9 |
| Other manufacturing | 9.3 | 13.1 |

Source: Policy simulation.