

Policy Coherence Initiative on Growth, Investment and Employment The Case of China

**What are the Macro Drivers of Growth, Employment
and Income in the Chinese Economy
A Case Study in Policy Coherence and Sequencing**

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What are the Macro Drivers of Growth, Employment and Income in the Chinese Economy – A Case Study in Policy Coherence and Sequencing

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1. Meeting the Challenge of Employment by Sustaining the Macro Foundations of High Growth in China, especially in the Context of the Current Financial Crisis

The Chinese economy with the largest labour force in the world of three quarters of a billion, thus faces the largest macro policy challenge, of generating sufficient growth to employ this labour force. Growth rates of GDP however have already peaked at 13% per annum for 2007¹, and have been very high for the last two decades. This dizzy growth rate itself threatens a number of macro imbalances, especially in the components of investment, and cannot be expected to increase further upwards. If anything an unwinding and soft landing in these components of investment was signalled. Yet even at these high growth rates, the employment and income challenges have remained critical.

The high GDP growth of 10% in 2005 generated just under 10 million jobs. Government and ILO estimates concur on the need for 24 million jobs per annum, to absorb the growth in the labour force and the gradual absorption of the backlog of the structurally unemployed, (ILO 2006)². This gives a job deficit and challenge of creating an additional 14 million jobs per annum. No wonder that all major economic policy statements by the Government prioritise employment, from the 66th Party Congress's pronouncement that *employment is the basis of the entire people's program* to the first element of the broad platform *program for harmonious development* being employment.

On top of this has come the global financial crisis, spilling from a crisis in sub prime mortgages, to a liquidity crunch, to a crisis in the real economy, increasing unemployment, reducing private demand. This has led to a slowing of GDP growth to the point of tipping the US and the EU into a recession. The IMF has substantially lowered its GDP growth forecasts for 2008 and 2009 for advanced economies, to 1.0% over 2008, and -2.0% over 2009³. The decline in growth in the developed countries, is leading to a decline in import demand especially from the US, affecting exports from developing countries especially emerging markets like China that had become so reliant on this driver of growth.

At the Asian Employment Forum in Beijing in August 2007, just a few weeks before sub prime crisis broke, the ILO had warned of Asian over reliance on exports, and the risk of continued sustainability of US based consumption demand for exports⁴. As a consequence of the crisis, already China's GDP growth has declined from 12.6% year on year in the

¹ IMF, 2009, World Economic Outlook, January 28.

² ILO and MOLSS, 2006, Poverty, Employment and Decent Work in Urban China.

³ IMF, 2009, World Economic Outlook, op cit.

⁴ ILO, 2007, Setting Policy Directions for Job Creation and Poverty Reduction, Asian Employment Forum: Growth, Employment and Decent Work, Beijing, China, 13-14 August 2007.

second quarter of 2007 to 9.0 % year on year in the third quarter of 2008⁵. The National Bureau of Statistics (NBS) of the Government of China has estimated GDP growth in the fourth quarter of 2008 to have slumped to 6.8% compared to the fourth quarter of 2007⁶. The IMF has estimated that China's GDP growth over 2008 has fallen to 9.0%, and projects it to fall further to 6.7% over 2009⁷.

China's considerable reliance on exports as a driver of growth has further committed it to a policy option of running large external surpluses, both on its current account and on its capital account. The surplus on the capital account is based on a prudential policy of accumulating the largest foreign exchange reserves in the world, verging on \$2 trillion. Some two thirds of these foreign exchange reserves are invested in the US, in large part on US government issued scrip.

This gives three macro drivers critically underlying the recent high GDP growth in China, (a) investment, (b) exports, and (c) consumption. This paper argues that there are macro imbalances between them, which threaten the sustainability of the high GDP growth needed to meet the largest employment and income challenge in the world. The current financial crisis serves to highlight these macro imbalances even more, calling for a quicker policy response, some of which has been forthcoming and needs to be evaluated.

The fundamental macro imbalance is an over reliance on the driver of investment. Domestic investment is peaking at 43% of GDP, which is already too high and its further growth is unsustainable. Investment abroad, through large currency reserves maintained in US paper, earning low rates, should also arguably be diversified into government expenditure in physical and social infrastructure and services at home. This enhanced investment in human capital will earn a higher social rate of return at home.

A second macro imbalance is over reliance on the driver of exports. Exports account for 27% of GDP, which is very high for such a large economy. Since export demand will always be determined exogenously, and can be prone to fluctuations as the current crisis shows, there has to be better diversification of demand between export and domestic markets.

A third macro imbalance is the consequent under reliance on the driver of consumption. Consumption in most countries, over most periods of time, is the largest driver of GDP growth⁸. In China, the driver of consumption was paramount in the 80s, but has subsequently declined in its share in GDP growth. It is important to increase consumption for two reasons. First it reduces poverty, and increases welfare. Second, since consumption is endogenously determined by domestic policy, it can help smooth out exogenously given fluctuations in export demand, as in the present crisis. Indeed, not just in China, but the global economy is looking towards the emerging economies to boost their consumption levels to counteract the demand deflation in the developed economies – some element of decoupling.

This paper bases these macro imbalances in China on two important determinants, employment and the real wage. The evidence on employment in China is more readily

⁵ World Bank, 2008, China Quarterly Update, December.

⁶ National Bureau of Statistics, Government of China, 2009.

⁷ IMF, 2009, World Economic Outlook, op cit.

⁸ Mahmood M. Global Drivers of Growth – the Cinderella of Consumption, forthcoming working paper.

observable than the evidence on the real wage on which work is ongoing. Investment has become very high because savings are very high and consumption is lower. Export are very high, because the domestic market which is based on consumption is lower. Consumption in turn is based on total employment times the real wage, which is the wage bill. There is good evidence that the employment component of the wage bill, was stronger in the 80s, and has weakened since with a growth strategy based on SOE reform and capital deepening. There is less clear evidence, but some indicators that the real wage component of the wage bill may have been low in the 80s, and the 90s, but has increased in the 2000s, for significant parts of the country, particularly in the export clusters in the South and the East. The unification of the labour market, between the urban and rural areas, through high rural urban migration has also had a dampening effect in the real wage in urban areas. The weakening employment component of the wage bill does seem to have overridden the real wage component, leading to weakening consumption over time.

Policy change is now called for, to strengthen both the employment and real wage components of the wage bill, and hence raise consumption. Another driver of growth affecting the real wage and consumption is government expenditure on social protection. Social protection has weakened over time, exacerbating the weakening of employment, depressing consumption. Expansion in coverage and transfers is called for, to put a social floor under consumption and boost it. The government is planning to pilot social transfers in rural areas on the lines of urban transfers. The crisis package of 14% of GDP over the next two years also addresses social protection, along with substantive job creation.

2. The Highest GDP Growth in the World still Poses Employment Challenges

China has had the highest GDP growth rate in the world since it embarked on its reforms in 1978. It has undergone significant sectoral transformation. Yet the challenge of employment in the world's largest labour force still remains considerable.

Between 1978 and 2005 China's GDP has grown at 9.5% per annum (Figure 1). Its GDP per capita alone has grown at 8% per annum. The next highest GDP growth per capita has been Korea with 5.5% per annum.

Between 1990 and 2000, China's GDP growth rate of 10.6% per annum was led by manufacturing growing at 12.9% per annum (Table 1). Over the most recent period 2000 to 2006, its GDP growth rate of 9.8% per annum was still led by manufacturing growing at 11.1% per annum. Consequently industry now comprises a half of the economy, and manufacturing one third.

China's population was estimated to be 1314.4 million in 2006 (Table 2). This gives an economically active population of 782 million, and an employed labour force of 764 million. 326 million, or 43%, were still employed in agriculture. 192 million, or 25% were employed in industry. While 246 million, or 32%, were employed in services. These vast demographics pose a considerable challenge unemployment and underemployment.

Estimates of unemployment and underemployment have to be mapped onto these base line demographics. Beginning with the rural areas, all the rural population in agriculture is considered to be employed. Under employment in agriculture however runs high, estimated

at about one third of employment. Based on this, estimates of surplus labour in agriculture range up to 150 million, which will need to transfer to urban areas.

Unemployment can be better estimated for urban areas. The Ministry of Human Resources and Social Security and the ILO have collaborated on estimating urban unemployment for 2005⁹. Table 3 shows that the registered unemployment rate of 4.2% gives an unemployed urban population of 8.3 million. Another 13.0 million are laid off workers, to which have to be added 0.5 million demobilised soldiers. This gives 24 million urban job seekers. The number of new urban jobs created in 2005 was just under 10 million. This gives an urban jobs shortfall of 14 million for 2005.

So a GDP growth rate of 9-10% per annum still leaves an urban unemployment challenge of creating an additional 14 million jobs per annum. The government plans to up the total of urban jobs created from 10 million per annum to 15 million per annum, to keep the urban unemployment rate at about 4.6%. A minimal GDP growth rate of 9% per annum is needed to keep the registered unemployment rate at its current level of 4.2%, based on creating just 10 million jobs per annum. Adding another 5 million jobs per annum to this current level of 10 million jobs per annum will require a GDP growth above 9% per annum. Gradual urban absorption of the 150 million surplus labour in agriculture adds to the annual jobs target, and to the desired GDP growth rate.

This raises a central question for China's growth strategy. The very high GDP growth rates sustained over the past 25 years of reform, averaging 10% per annum, have been remarkable, and unparalleled by other countries over this period. But this high GDP growth still leaves a large jobs shortfall in urban areas, and considerable surplus labour in agriculture. Even if the global conditions that underlie this high growth were to persist, raising GDP growth much further above 10% per annum does not seem probable. On the contrary, the current financial crisis has devalued assets, led to a credit crunch, and reduced demand both global and domestic. This has already lowered China's GDP growth rate to 9%. And these global conditions are expected to not only persist over 2009, but to get worse. Further, if there is demand deflation, both globally and domestically, and China's GDP growth drops, and with it employment also drops, this will reduce domestic demand further in downwards spiral.

Hence there is a need to examine the macro drivers of growth in China, to see if there is space to improve the employment content and employment conditions of GDP growth. What the study shows is that employment and key conditions of employment like the real wage are not just the end product of GDP growth, but an input into GDP growth, working through the main drivers of growth, investment, exports, and consumption.

3. Macro Drivers of GDP Growth for China

Macro Drivers of Growth

The usually agreed macro drivers of growth are sources of demand¹⁰. There is demand for goods and services for: (a) consumption, (b) investment, (c) net exports, which is exports

⁹ Decent Work, Employment and Poverty Reduction in Urban China, 2007, Institute for International Labour Studies, Ministry of Human Resources and Social Security, People's Republic of China, and ILO.

¹⁰ See eg. Mankiw N.G. 2007, Macroeconomics, Worth Publishers

minus demand for imports which contributes to other countries' goods and services, and (d) provision by the government. These four sources of demand for goods and services, between them, account for all output produced. Growth in this output over time, therefore is also accounted for by these four drivers. It is these drivers of growth that have to be estimated and observed¹¹.

The magnitude of these sources of demand, of consumption, investment, net exports and government expenditure, are in turn determined by a host of supply and demand side factors, some of which are more quantifiable, and therefore more policy amenable. The level of consumption demand is dependent strongly on income, which in turn is provided by wage, profit and rental incomes. The level of investment demand is determined broadly by the level of total aggregate demand, profitability conditions, and the risk environment. The level of export demand is determined strongly by Unit Labour Costs (ULCs), in turn a function of productivity, wages, exchange rates and market access. The level of government expenditure is determined by revenues, the demand for expenditures, and the fiscal and monetary space permitted.

Estimating the macro drivers of GDP growth for China

Then the total growth of output for a country, over a period of time, can be entirely accounted for, by these four drivers of growth, growth of consumption, growth of investment, growth of net exports, and growth of government expenditure.

The estimation should preferably be over a long period of time, to demonstrate long run stability in these drivers of growth. So GDP growth has been considered over two time periods, 1980 to 1990, and 1990 to 2004. Estimation has been based on the World Bank's decomposition of demand in these four time periods¹². This has allowed estimation of aggregate growth at a country level, and decomposition of that growth into estimation of growth of consumption, investment, net exports and government expenditure, (see Appendix for methodology).

Table 4 estimates aggregate growth for China, for the two time periods, 1980 to 1990, and 1990 to 2004. It then estimates the shares in this aggregate growth caused by consumption growth, government expenditure growth, investment growth and net export growth. Figure 2 gives a better visual of the table.

In the period 1980 to 1990, which is the first period of the reforms, consumption growth is seen to be the largest driver of GDP growth, followed by investment growth, and then export growth. During 1980-90, GDP grew at 8.9% per annum, and consumption growth accounted for 3.8 percentage points, or just under a half of this GDP growth. Investment growth accounted for 3.3 percentage points of the GDP growth, close to but less than consumption growth. Export growth accounted for 2.2 percentage points of this GDP

¹¹ There is a good set of theoretical wage led growth models, eg Bhaduri A. and Marglin S. 1990, Unemployment and the Real Wage: Economic Basis for Contesting Political Ideologies, Cambridge Journal of Economics, Vol. 14, 4, December, Felipe J. and Hasan R. 2006, Labour Markets in Globalising World, in Felipe J. and Hasan R. (eds), Labour Markets in Asia, Palgrave. This paper takes a different, empirical approach, in attempting to observe the existing components of growth over time, rather than positing them a priori to examine their dynamics.

¹² World Development Indicators online data set 2007, WDI 2006, World Bank

growth, as the third driver of growth. Government expenditures account for 1.2 percentage points of this GDP growth, as the fourth driver of growth.

In the period 1990 to 2004, the second period of the reforms, the drivers of growth change in their rankings. Investment growth became the largest driver of GDP growth, followed by export growth, and then only by consumption growth. Over 1990 to 2004, GDP growth increased to 9.6% per annum, and investment growth accounted for 4.4 percentage points of this GDP growth. Export growth accounted for 3.8 percentage points of this GDP growth, as the second driver of GDP growth. And consumption growth accounted for 3.6 percentage points of this GDP growth, now ranking as the third driver of GDP growth. Government expenditure accounted for 1.4 percentage points of this GDP growth, remaining the fourth driver of GDP growth.

Three important points emerge from this growth accounting exercise. One, in the first reform period of 1980 to 1990, very high GDP growth of 8.9% per annum was led by consumption growth followed by investment growth. In the second reform period of 1990 to 2004, GDP growth was pushed up even higher to 9.6%, but now led by investment growth followed by export growth. Two, not only did consumption growth drop down in its relative ranking as a driver of GDP growth, from first to third over the two time periods, but the absolute share of consumption growth in GDP growth dropped down from 43% (of a 100% GDP growth) to 38% between the two time periods. Three, China stands out in this change in the ranking of drivers of growth between 1980-90 and 1990-04, because typically consumption growth accounts for most GDP growth in most countries for most of the time¹³.

At first blush, there seems to be no problem with the quest for even higher growth after the first reform period of 1990 to 1990. Nor does there seem to be a problem with the achievement of this higher growth by resorting to investment and export led growth over 1990 to 2004, rather consumption led growth as in 1980-90. However problems arise on two counts, employment, and the current financial crisis.

First, as noted above in Section 2, the highest GDP growth rate in the world still gives China a large employment challenge, of the need for an additional 14 million urban jobs per annum. So the switch from consumption led GDP growth to investment and export led GDP growth may not have been that employment friendly.

Second, as seen in Section 1 above, the current financial crisis has led to declining demand by the US and the EU for imports from developing and emerging economies like China. The relative decline in the export market will shrink China's export driver and require increasing reliance on the domestic market and hence the driver of consumption. Then too, consumption and its mirror opposite savings and investment, depend on employment and real wages – the wage bill. And the depression of consumption and rise in savings and investment must have based on depression of the wage bill, through either employment, or wages or both.

So China's quest for even higher growth after the first reform period of 1980 to 1990 may have led to macro imbalances. These macro imbalances need to be examined further, and the employment and wage factors underlying them.

¹³ Mahmood M, op cit.

4. Investment and Savings

Investment

In 2005, China's investment rate was estimated by the National Bureau of Statistics to be 43% of GDP. There are concerns that this could be an over estimate of investment because it includes the value of land sales. So when the price of land rises, so will estimates of investment. This paper does not attempt to address the measurement problem. However there is good evidence to show two distinct trends in investment, during the two reform periods noted above, broadly 1980 to 1990, and 1990 to 2004. In the first period of 1980 to 1990, the level of investment is distinctly lower. The contribution of capital to GDP growth is also lower, possibly lower than the contribution of labour, although this may be moot. In the second period of 1990 to 2004, the level of investment is distinctly higher. The contribution of capital to GDP growth is also higher, and distinctly higher than the contribution of labour. The Incremental Capital Output Ratios (ICORs) also pick up accordingly between the two periods, as does Total Factor Productivity (TFP). So the first reform period of 1980 to 1990 can be characterised as one of labour intensification or deepening, while the second period can be characterised as one of capital deepening.

Figure 3 shows Gross Capital Formation (GCF) from 1978 to 2005 for China and for Korea. In the period 1978 to 1990, China's GCF hovers just above and below 35% of GDP. After 1990 it shoots up, to 42% of GDP by 1994, then climbs back down to 36% of GDP by 1999, then shoots up again to 43% by 2005. There are several important points to note.

One, in terms of comparable experience, Korea has never matched China's level of GCF, except briefly in the early 90s when it exceeded China, and in the late 90s when it matched China. In the last decade, Korea's GCF has settled at about 30% of GDP, compared to China's rise from 36% of GDP to 42% of GDP. So overall, China has chosen a very high level of capital deepening.

Two, clearly after 1978 capital deepening was needed to enhance productivity, but this followed two distinct phases. In the first reform period from 1978 to about 1990, China's GCF hovered around 35% of GDP, which was already higher than Korean GCF. In the second reform period, after 1990, China's GCF shot up higher to a band range of 36% to 43%.

Three, there is some evidence that in the first reform period of 1978 to 1990, the increase in GCF was accompanied by labour intensification as well. But in the second reform period from 1990 onwards, there has only been capital deepening. Table 5 surveys a large number of studies that have estimated factor productivity for different time periods. Most studies observe factor productivity over one long time period. There are two exceptions, both of which estimate factor productivity for the two reform periods, 1980 to 1990, and 1990 onwards.

The Bosworth and Collins study shows clearly that in the first reform period 1980 to 1990, GDP growth of 9.2% was led by labour productivity contributing 31% of the total growth, capital productivity contributing 23% of the total growth, and Total Factor Productivity (TFP) contributing 46% of the total growth. This changed for the second reform period from 1990 to 2000, when GDP growth picked up to 10.1%, but now being led by capital

productivity contributing 32% of total growth, labour productivity contributing only 18% of total growth, and TFP contributing 50% of total growth.

The more recent Kuijs study does not afford the neat compartmentalisation made here of the two reform period, because its cutoff between two time periods is later 1993, by which time the GCF has been observed above to have shot up to 43% of GDP. So this study shows that between 1978 and 1993, and between 1993 and 2005, GDP growth was led by capital productivity contributing first 46% of total growth, and then 61% of total growth. Labour productivity contributed very little, first 13% of total growth, and then 6% of total growth.

Four, the two reform periods, 1980 to 1990, and 1990 onwards, are picked out very clearly by distinct trends in the ICORs. Figure 4 shows that the ICOR drops from 2 to 1.5 over the first period, and then rises to 3.6 over the second period.

Savings

The high and increasing levels of investment in China have been led in the first instance by high and increasing levels of savings. And the largest contribution to savings has been by households. Since savings are the mirror opposite of consumption, this has important implications for consumption as a driver of GDP growth.

Figure 5 gives the investment and savings rates for the last decade. It shows that the investment rate has largely been determined by the savings rate, with the two moving together until recently, 2005, when they move apart. It also shows that the investment rate has climbed up since 2000, and on trend since 1994, to plateau out at 43% of GDP after 2005. However the savings rate has been climbing since 2000, and on trend since 1994, to reach current levels of 50%.

This very high level of savings, and rising trend is contributed to by three savers, households, enterprises, and the government. Figure 6 shows that the largest contributor to national savings is households, followed by enterprises, and then the government. From the 90s onwards, for which there is data available, households have contributed savings between a band range of 16% and 20%. Enterprises have contributed savings between a band range of 13% and 15%, with the exception of 2004, when their saving have shot up to 22%, above the contribution of households. The government has contributed savings between a band range of 5% and 9%.

The renewed surge in investment since 2000 has been contributed to by both households and the government increasing their savings by 3% each. Enterprises have increased their savings only after 2003, and then have contributed significantly to the more recent rise in the savings rate.

FDI

Clearly China's investment at home includes both domestic savings and FDI inflows. Figure 7 shows an FDI level in 2005 of \$60 billion. However given China's large savings in foreign exchange reserves invested abroad, there are net outflows rather than inflows, as discussed below in the Section on exports. So China's high investment rate does not owe to FDI inflows.

5. Consumption

Savings are the mirror opposite of consumption. So the increase in the investment and savings rates between the first reform period of 1980 to 1990 and the second reform period from 1990 onwards, explain the drop in the consumption driver of GDP growth observed in the second reform period. As savings and investment shares in GDP went up in the second reform period, consumption shares came down. The question is why?

An answer is offered in terms of the supply and demand constraints that characterised these two reform periods. It can be argued that the first reform period from 1978 to 1990, was characterised by a supply constraint on output. State Owned Enterprises (SOEs) performed relatively better during this period, so there was labour absorption rather than reform and retrenchment of labour. Hence the distribution of income was still relatively egalitarian. So the inherited system of social protection sufficed. Hence consumption was high, and the major driver of GDP growth.

In contrast, the second reform period from 1990 onwards, can arguably be characterised as being constrained by domestic demand for output. SOE's performed badly, so needed reform and retrenchment of labour. Resultantly the distribution of income became more unequal. So the system of social protection also became more burdened and therefore weaker. Finally in the late 90s the Asian financial crisis also devalued assets, added to retrenchment of labour and so reduced demand. Hence consumption dropped, no longer the major or even second driver of GDP growth, but the third. Investment had to be raised significantly to generate its own demand, becoming the major driver of GDP growth. While exports stepped in to supplement weakened domestic demand.

The First Reform Period – a Supply Constraint on Output SOEs and TVEs

There is considerable debate about the performance of public sector enterprises since the advent of the reforms in 1978¹⁴. However there does appear to be some agreement that the public sector enterprises performed better in the first period of reforms from 1978 to about 1990. The criteria here is not profitability per se, but labour absorption. Table 6 shows that between 1980 and 1990 SOE's increased their employment from 80 million to 103 million. This increase in employment actually continues till 1995, although at a decreasing rate, rising to 112 million. Subsequently SOE employment drops. Collective units expand their employment from 1980 to 1990, from 24 million to 35 million. After this their employment levels also drops.

Rural Township and Village Enterprises (TVEs), similarly also increase their levels of employment, between 1980 and 1990, from 30 million to 93 million. After 1990 their level of employment rises further to 128 million, and then plateaus.

So in the first reform period, broadly from 1978 to 1990, public sector enterprises absorbed labour rather than retrenching it. Some SOE's and TVE's even continued absorbing labour till 1995.

¹⁴ Lu Dic, 2007, China's Economic Growth and Employment, ILO.

Income Inequality

Table 7 shows that the Gini index for income inequality was very low in 1978, 0.16 for urban areas, and 0.21 for rural areas. By the end of the first reform period it had inched up, for urban areas to 0.25, and for rural areas to 0.31. Subsequently the Gini rises up much more sharply.

The Social Security system

The stylised implication of mathematical models of individual budgets for China, and indeed elsewhere, is that social protection is positively correlated to consumption, and inversely correlated to savings¹⁵. So if social protection coverage increases, the need for saving for contingencies like unemployment, health care, and pensions goes down, while consumption increase. Conversely, if social protection coverage drops, the need for saving for such contingencies goes up, and consumptions drops.

It is reckoned that in the first period of reform, the inherited social security system worked till the mid to late 80s. The public sector was also absorbing labour, rather than retrenching, so the burden on unemployment benefits was relatively low in this period. Reform of the social security system began toward the end of the first reform period.

Consumption and Aggregate Demand

Given these characteristics of the first reform period of 1978 to 1990, aggregate demand was generated domestically through consumption. Figure 8 disaggregates GDP into three expenditure components of aggregate demand, consumption, investment and net exports (exports minus imports), from 1978 to 2006. In the first reform period from 1978 to 1990, consumption accounts for 60%-65% of aggregate demand expenditure. After 1992 the share of consumption in demand expenditure begins falling.

Conversely, in the first reform period of 1978 to 1990, investment accounts for 32%-38% of aggregate demand expenditure, and is declining on trend. After 1992 the share of investment in demand expenditure begins rising.

And contrary to the impression that China's post reform economic growth is entirely an export based one, in 8 of the 12 years in the first reform period, net exports are negative. It is in the next reform period from 1990 onwards that China registers persistent trade surpluses.

Hence the high growth in the first reform period, from 1978 to about 1990, is seen to be based on domestic demand, led by the driver of consumption. The driver of investment was led by the driver of consumption.

The Second Reform Period – A Demand Constraint on Output SOEs and TVEs

The second reform period from about 1990 onwards, is characterised by sweeping market reforms, particularly the privatisation of public enterprises, especially in the mid 90s. This

¹⁵ Yongding Yu, 2008, What are the macro drivers of growth in the Chinese Economy, ILO.

resulted in massive retrenchment of labour in public enterprises. Table 6 shows that between 1995 and 2005, urban public enterprises decreased their employment level by 71 million workers, 48 million workers from SOEs, and 23 million workers from collective units. The share of public enterprises in urban employment dropped from three quarters to one quarter.

In rural areas, TVE's employment growth, which had been high in the first reform period, plateaued out.

In theory this massive retrenchment in the second reform period was a restructuring process, with the possibility of public sector labour transferring to the private sector. Yet the stylised fact was that the profit orientation of employers, both public and private meant very low re-hiring.

Income Inequality

As a result of the sweeping market reforms in the second period, the massive retrenchment of labour from public enterprises, and reduction in income and increase in job insecurity, all contributed to a sharp increase in income inequality. Between 1992 and 2004, the national Gini coefficient almost doubled to 0.47, (Table 7).

The Social Security System

The socialist social security system was based on the *iron bowl* of life time employment. The massive retrenchment of labour in the second reform period put huge strain on this system. Replacing the old social safety net with a new one began in the second reform period. However the continued rise in savings over this second reform period implies that protection coverage has been slow.

The social security system comprises three main elements, pensions, unemployment insurance, and medical care insurance. By end 2007, 77% of the urban population was covered by the basic pension scheme, and 78% were covered by unemployment insurance. Medicare insurance in urban areas covered 180 million, but in rural areas only 31 million farmers. The large gaps in the social security system are the differentials between the urban and rural areas, and very low coverage of the 150 million rural urban migrants¹⁶.

Consumption and Aggregate Demand

As a result of the SOE restructuring, and market reforms including commercialisation and lowering of private bank lending, there was reckoned to be serious deficiency of aggregate demand between 1995 and 1997. Then came the impact of the Asian financial crisis, which plunged the Chinese economy into three years of deflation. Counter cyclical macro policies followed, including increasing welfare benefits for the unemployed and retirees. But basically the government propped up the deficiency in aggregate demand by increasing investment based on issuing debt. Figure 9 shows that the governments budget deficit, which was under 1% of GDP for the first reform period, shot up over the second reform period to 2.5% of GDP by 2002. Government debt issuance peaked over this second reform

¹⁶ MHRSS, and ILO, 2007, Decent Work, Employment and Poverty Reduction, op cit.

period at near 5%. Government investment in infrastructure is estimated to have added 1.5% to 2% of GDP growth over this period.

The impact of these deflationary factors has obviously persisted well into the 2000s. Hence Figure 10 shows that over this second reform period, consumption's share in GDP drops down from 62% in 1992, to just 50% by 2006. Conversely the share of investment in GDP shoots up from 35% to 42% over this second reform period. The deficiency in aggregate demand over this second reform period is also filled in by exports, with China showing persistent and rising trade surpluses over this period.

Hence high growth over the second reform period, from about 1990 onwards, is seen to be based on investment demand and export demand, with consumption demand deflating with the massive restructuring of SOEs, increasing income inequality, the burdened social security system attempting to reform itself, and the impact of the Asian financial crisis.

6. Exports

So exports emerge as the second major driver of GDP growth in China, in the second reform period from about 1990 onwards, with the depression in domestic demand. The economy's reliance on exports has increased considerably since 1990. This export reliance makes the economy vulnerable to sustained demand for imports, particularly from the US and the EU, which has shrunk with the current financial crisis.

China's great success in exports has also been transformed into a policy of maintaining twin surpluses, on its current account, and on its capital account. This arguably wastes its precious capital, locked up in low return US paper, when it could be used much more productively at home, in human resource development, increasing productivity and social returns. However this also finances the US's large trade deficit, and US imports of Chinese goods.

China's success in exports also attracts record FDI inflows for a developing country. But its much larger outflows, earning lower rates of return, actually finance the FDI inflow, on which a much higher return has to be paid out by China. It can also be argued that with such a high savings rate, why does China need these FDI inflows in the first place.

Export Reliance

China's competitiveness has enabled it to increase its export and trade shares in GDP significantly. This competitiveness is based on Unit Labour Costs (ULCs), which in turn are based on manufacturing wages, productivity, and exchange rates.

Table 8 gives the ULCs of other developed and developing countries as a ratio of the Chinese wage level, for 1998. Even low income economies like India and Zimbabwe had ULC's which were 50% to 220% higher in 1998. Table 9 compares hourly wages between China and other high income economies in 2005. China's wage of \$0.67 per hour was less than a quarter compared to Mexico's wage of \$2.62, and much below Taiwan's wage of \$6.38. Table 10 gives the Total Factor Productivity (TFP) for Chinese industry between 1998 and 2002. It shows that over these four years, TFP increased by almost a half.

Figure 10 shows that this ULC based competitiveness has enabled China's export share in GDP to rise from 18% in 1990 to 38% by 2006. China's trade share in GDP in this period rose from 30% to near 70%. And during this entire period China maintained an export surplus, except for one year. By 2006, China's share in global trade had risen to 7%.

With such high growth in the export share of GDP, the employment share of the export sector in total employment, has also shot up. Table 11 shows that employment in the export sector increased from 22 million in 1998 to 26 million in 2002. Current estimates of export sector's employment are about 30 million, which is approximately one tenth of total urban employment.

China has thus come to sit at the centre of global production networks as Figure 11 illustrates. It combines capital and technology from Japan, Korea and Taiwan, with primary commodities and resources from Australia, the ASEAN countries and Africa, with financial, commercial and legal services from Hong Kong and Singapore. It manufactures, processes, and assembles these inputs in China, and ships them to the US, Europe and the rest of the world.

The Twin Surpluses

This huge success in exports, has resulted through policy, in China running twin external surpluses, on its current account, and on its capital account.

Reviewing the theory of external balances, based on the following accounting identities:

With GDP, consumption, investment, exports, imports, savings, capital account, current account, and investment income balance represented by Y, C, I, X, M, S, KA, CA, and IN.

The national income accounting identity is:

$$Y = C + I + X - M$$

Simplified balance of payments identities are:

$$KA = CA = X - M + IN$$

$$Y = GNP + IN$$

Savings are given by:

$$S = GNP - C = Y + IN - C$$

Substituting for Y gives $S = (C + I + X - M) + IN - C$

Simplifying gives the relationship between savings, investment, current account balances, exports, imports, the investment income balance, and the capital account.

$$S - I = CA = X - M + IN = KA$$

This says that the gap between domestic savings and investment is equal to the current account balance, which is equal to the trade balance plus investment income balance, which is also equal to the capital account balance.

Usually, a developing country should usually run a current account deficit and capital account surplus. The argument is that a developing country with a low income usually has a

low savings rate which will restrict its investment rate. This investment savings gap leads to buying goods and capital from abroad. Imports exceed exports giving a trade deficit and current account deficit for the developing country. To finance the current account deficit, the developing country has to attract foreign capital inflows, hence the capital account surplus.

In contrast, a developed country should usually run a current account surplus and capital account deficit. The high income country will have a high savings rate. Since returns on investment in developed countries are usually lower than those in developing countries, the developed country will invest its excess savings in developing countries. So the excess of savings over investment will give the developed country a trade surplus and current account surplus. The foreign exchange earned from the current account surplus will then be used to invest abroad, hence the capital outflow and capital account deficit.

The only precedent for running twin surpluses for a sustained period is Singapore which ran them from 1987 to 1993¹⁷.

China has now run twin surpluses for 16 years since 1990, as Figure 12 shows, and will probably continue to do so for some time. In 2006 China's current account surplus was \$200 billion. And it had FDI inflows of \$60 billion. As a result China's foreign exchange reserves have built up at an unprecedented rate as Figure 13 shows. The current estimate of these reserves is \$2 trillion. The current rate of build up of these reserves is \$250 billion per annum. Some two thirds of these foreign exchange reserves are held in US government backed paper.

Running these twin surpluses may be a considerable misallocation of resources for the Chinese economy.

First, China's domestic savings are so high that they finance in effect not only the FDI inflows coming into China, but also finance the US current account deficit. This happens because China earns \$200 current account surplus per annum from abroad. This current account surplus already dwarfs the \$ 50 billion FDI coming in annually and can be used to substitute for the FDI for imports of goods technology and managerial skills.

Second, China's large current account surplus, and resultant accumulation of reserves, which are then invested abroad, has made it a net capital exporting country for the past 15 years. Its net international investment position (NIIP) of \$120 billion in 2004 made it the sixth largest net creditor in the world. By 2005, this NIIP rose to \$288 billion, making it the third largest net creditor. However Figure 14 shows that China's investment incomes from abroad have been consistently negative. This should not happen in a developing country with scarce capital, which would be better used for investment in domestic human resource development and social infrastructure, to raise productivity at home and earn much higher social rates of return. Given excess savings, FDI inflows into China are basically crowding out domestic investment.

Third, China's NIIP invested in the US in low yield treasury bills goes to finance the US current account deficit, with a very low return to China, and therefore at a very low cost to the US. On the other hand, it is precisely this high consumption and low savings in the US,

¹⁷ Monetary Authority of Singapore: Singapore's Exchange Rate Policy, 2001.

which translate into the US trade deficit and current account deficit with China, which provides demand for China's exports. So China is basically providing supplier's credit to the US to buy its exports.

Fourth, returns are required on the FDI coming into China, and yield is paid on China's investment in US treasury bills. However the financial cost of the FDI is much higher than the yield paid on the US treasury bills. The economic cost of the FDI is even higher when the hidden subsidies are calculated in the concessional conditions on taxes, energy, rent, and lower environmental and other regulatory frameworks.

Fifth, running twin surpluses misallocates China's resources across alternative forms of investment, that is domestic versus foreign investment, but also across generations. Currently China has a relatively young population with a low and falling dependency ratio which encourages higher savings. With the aging of the population distribution, this dependency ratio will begin to rise, and the savings rate will fall. Hence it is important to utilise this period of higher savings, to earn higher returns to offset for the oncoming fall in the saving rate.

To put it simplistically, capital controls and exchange rates are the given parameters from which the twin surpluses result. Capital controls perform two useful functions. They loosen the link between domestic and foreign policy, allowing the government to pursue a domestic agenda that is not entirely driven by foreign capital flows. And they cushion the exchange rate and reserves, as the lessons drawn from the Latin American crisis and the Asian financial crisis have shown. Capital controls in fact allowed the Chinese currency to escape the worst attacks of the international speculation during the Asian crisis, and slowed the agenda of liberalising capital accounts for China. The current financial crisis will reinforce this trend.

There is a large debate on the under valuation of the Chinese exchange rate. The RMB was pegged to the US Dollar till July 2005, after which there has been a managed float. There is pressure from the US to appreciate the RMB faster to lower the US trade deficit with China. The RMB has appreciated some 20% against the US Dollar since the managed float. The main arguments against faster appreciation of the RMB, are its negative impacts on employment. This is especially important in the context of the current slowdown in growth, with for instance China's textile industry highly dependent on exports. It employs 19 million workers, with an average profitability of 3.5%. So the impact of a large one off appreciation of the RMB by say 5% would cause massive unemployment.

7. This gives a Macro Imbalance between the Drivers of Growth, Investment, Consumption and Exports is based on Employment and the Real Wage.

In summary, high GDP growth in post reform China has been based on three main drivers, consumption, investment and exports. In the first reform period from 1978 to about 1990, consumption was the main driver of growth, creating demand for the second main driver of growth investment. In the second reform period from about 1990 onwards however, SOE reform led to massive retrenchment, and increasing inequality, depressing consumption and demand. This also burdened the system of social protection, increasing forced savings for contingencies. The Asian financial crisis further depressed demand in the late 90s. This demand depression was filled in by investment rising to near 49% of GDP, and rising exports. In this second reform period then, even higher GDP growth was led by the driver

of investment followed by exports. The driver of consumption slumped to third, declining in its share in GDP down to 60%.

This relative balance between the drivers of growth is unsustainable, and hence an imbalance, for several reasons. One, even such high GDP growth of 10% per annum, based on the current configuration of the drivers of growth, leaves a large employment deficit of some 14 million urban jobs per annum. Much higher GDP growth is not feasible to fill the jobs gap, so the current configuration of the drivers of growth needs to be changed to a more job rich one, to begin to meet the urban jobs gap, and to start meeting the backlog of the labour surplus in agriculture.

Two, the very high investment rate cannot be increased further to deliver higher GDP growth rates. Indeed the high investment rates and high savings rates have peaked in the second reform period not for their own sake, but because of a weakness in aggregate demand, stemming from consumption.

Three, the decline in consumption as a driver of GDP growth, weakens the individual and the economy, dampening aggregate demand. The impact of the current financial crisis has been to dampen domestic demand further, lowering GDP growth from 10% to 9%.

Four, the depression in domestic demand from declining consumption, was filled in by increasing investment, and by greater reliance on export demand. The ILO had warned even before the onset of the current financial crisis, that high GDP growth based on maintaining high exports to the US and the EU countries could not be sustained in the longer term. The current crisis has now reduced the import demand from the US and the EU, re-emphasising the importance of balancing out export demand with domestic demand in China.

Five, the surplus of savings over investment give a large current account surplus, while low ULCs attract high FDI inflows, giving China twin surpluses. These twin surpluses misallocate scarce capital in a developing country, exporting capital to earn a low return from US treasury bills, when it would be better invested domestically in human resource development, raising productivity and earning higher social returns at home.

So GDP growth in the second reform period in China has been based on an imbalance between the three main drivers of growth, consumption, investment and exports. Correcting the imbalance however requires determining the factors underlying this imbalance. The factors underlying this imbalance are arguably employment and the real wage, which is the wage bill. It is the fall in the wage bill, due to SOE reforms in the second reform period, with retrenchment, and falling wage incomes, that led to the decline in consumption and therefore aggregate demand. It is also the inability of the social protection system to compensate adequately for the fall in employment and wage income, that has led to savings increasing for contingencies. Unification of the labour market, through the relaxation of the Houkouw system, leading to huge rural urban migration may also have dampened the real wage. A weak real wage simultaneously underlies weakening domestic demand, and through low ULCs implies stronger export demand.

The evidence on employment shows a strengthening over the first reform period, followed by a weakening over the second reform period. The evidence on the real wage is not so clear. In the first reform period, the real wage has been low. In the second reform period, the real wage has been low over the 90s, but has increased significantly in the 2000s.

The impact of the wage bill, of employment times the real wage, on consumption and aggregate demand however is complex. The impact of employment overrides the impact of the real wage. In the first period of reform, with employment increasing, and the real wage constant, consumption increases, along with aggregate demand. In the second reform period, between 1990 to 2000, employment weakens, and the real wage is still constant, so consumption drops along with aggregate demand. From 2000 onwards, employment is still weak, although the real wage increases, but consumption continues to fall.

So clearly for China, the employment effect on consumption, aggregate demand and growth is greater than the real wage effect observed so far. This implies that macro policy to raise consumption and domestic demand to raise GDP growth, has to be more even handed in focusing on both employment and real wages, rather than a narrower focus on either one or the other.

Albeit, this evidence on the real wage is limited, and must be regarded as work in progress. The ILO is working with the Ministry of Human Resources and Social Security, and the National Bureau of Statistics to obtain better coverage of the real wage.

Employment

The trend in employment is clear, and consistent with the observed imbalance in the drivers of growth. In the first reform period, strong employment underlies consumption led growth. In the second reform period, weakening employment underlies weakening consumption growth.

Table 12 compares GDP growth, to employment growth and labour force growth, from 1978 to 2006. In the first reform period between 1978 and 1990, real GDP grew from a base of 100 to 282. Employment over this period grew by less, from a base of 100 to 161. However employment growth was exactly equal to labour force growth, which increased from a base of 100 to 161.

In the second reform period, from 1990 to 2005, real GDP increases from 281 to 1195. In comparison, employment barely increases from 161 to 189. And labour force growth over this period is higher, increasing from 161 to 191. So in this second reform period, labour force growth is higher than employment growth.

As Figure 15 shows more vividly, in the first reform period between 1978 and 1990, employment growth tracks labour force growth very closely. In the second reform period from 1990 onwards, and particularly after 1993, employment growth diverges from labour force growth.

This implies an increase in unemployment rates over the second reform period. However since rural employment is considered to be full employment by definition, the unemployment rate is better tracked over time for urban areas. Table 13 gives a registered unemployment rate, and an estimated unemployment rate from 1978 to 2005. The estimated rate of unemployment is the gap between the economically active population and the level of employment, expressed as share of the economically active population.

The table gives two important findings. One, it shows that the estimated unemployment rate was equal to the registered unemployment rate over the first reform period, up to about 1989. And between 1978 and 1989, the registered and estimated unemployment rates fell down to a band range of about 2% to 2.6%. So in this first reform period, enough employment was being generated to not only employ the growth in the labour force, but also to cut down on the back log of unemployment from previous periods.

Two, over the second reform period, broadly after 1989, the estimated rate of unemployment was higher than the registered rate of unemployment. And both the estimated rate of unemployment and the registered rate of unemployment started increasing from about 1989. By 2005, the registered rate of employment had increased to 4.2%, while the estimated rate of unemployment had increased to 7%. Note that this form of estimation of unemployment gives a higher estimate than the earlier cited one of a 14 million urban jobs deficit for 2005. So this estimate raises the employment target.

Table 13 gives the employment elasticity with respect to GDP growth for the two reform periods. The table shows that in the first reform period, from about 1979 to 1989, GDP growth of 9.6% per annum had an employment elasticity of 0.34. From 1990 onwards, GDP growth picks up further, but the employment elasticity falls by about two thirds to between 0.9 and 0.13.

Wages, Productivity and Transfers

The trend in real wages is more complex than the trend in employment. In the first reform period, between 1978 and 1990, the urban real wage drops. In the second reform period, from 1990 onwards the real wage increases. However for both reform periods, real wage growth lags behind GDP per capita growth till 1999, after which real wage growth outstrips GDP per capita growth. The difference between the real wage growth and GDP per capita growth is a transfer from labour to capital.

The trend in labour productivity shows another transfer, from industry to agriculture, through pricing.

Figure 16 gives the annual growth rates of both the real urban wage rate, and the per capita real GDP from 1980 to 2005. In the first reform period from 1980 to 1990, growth of the real wage rate dropped on trend, from 2.5% to 2%. In the second reform period, from 1990 onwards, the growth in the real wage rate increased on trend, from 2% to 13%. So in the first reform period real wage growth was weak, while employment growth was strong. In the second reform period, real wage growth was strong while employment growth was weak. This appears anomalous until real wage growth is compared to real GDP per capita growth.

In both the reform periods, from 1978 to 1999, real GDP growth was higher than real wage growth. The difference between real GDP growth per capita and real wage growth in the first reform period increased from 3.5% to 4%. In the second reform period from 1990 to 1999, real GDP growth per capita and real wage growth moved apart, especially in the mid 90s, with real GDP per capita growth increasing, and real wage growth decreasing. Only after 1999 did real wage growth exceed real GDP per capita growth.

This gap between real GDP growth per capita and real wage growth, between 1978 and 1999 represents a huge transfer from urban labour to capital. But in the first reform period, from 1978 to 1990 this accumulation of capital was used to generate close to full employment, while in the second reform period from 1990 onwards, sufficient employment was not generated, unemployment increased, while enterprises accumulated capital and savings. Table 14 decomposes GDP growth into the shares and hence returns to capital and labour. The table shows that between 1983 and 1993, approximately the first reform period, the share of capital went down from 5% of GDP growth to 4.5%. The share of labour also fell from 1.5% of GDP growth to 1%. However between 1993 and 2003, approximately the second reform period, the share of capital increased back up to 5.5% of GDP growth. Table 15 shows that the increased returns to capital over this second reform period, from about 1992 to 2001 also translated into increased shares in savings for non financial enterprises, rising from 28% to 38%.

If there was a transfer from urban labour to capital during the two reform periods from 1978 to 1999, there was also a sectoral transfer from industry to agriculture. Figure 17 gives the relative labour productivity of industry over agriculture. It gives this index in constant prices and nominal prices. In the first reform period from 1978 to 1990 both indices of industrial to agricultural productivity, in constant and nominal prices, went down somewhat. This was due to the massive transfer of agricultural labour to industry. However in the second reform period, from about 1990 onwards, the productivity index in constant prices rose up, diverging significantly from the productivity index in nominal prices. Since industrial productivity was increasing in real terms, while remaining constant in nominal prices, this represents a transfer from industry to agriculture through pricing.

The Impact of Employment and Wages on Consumption and Aggregate Demand

The impact of employment and real wages on consumption and aggregate demand is interesting and complex. In the first reform period from 1978 to 1990, consumption was strong along with aggregate demand. In the second reform period from 1990 onwards, consumption was weak and declining, with demand deflation especially in the mid and late 90s, hence there was greater reliance on investment demand and export demand rather than domestic demand.

Employment in the first reform period increased to near full employment. But real urban wage growth fell over this period, and was below real GDP per capita growth, leading to transfers from urban labour to capital. However the increased capital accumulation was used to generate full employment. So the strong employment effect on strengthening consumption and aggregate demand, was also subsidised by a weak wage effect.

In the second reform period from 1990 onwards, employment generation was weak, and unemployment increased, due to SOE reforms and the impact of the Asian financial crisis. But real urban wage growth increased over this period. And between 1990 and 1999, real GDP per capita growth continued to exceed real wage growth, after which it reversed, with real wage growth exceeding real GDP per capita growth. The transfers from urban labour to capital between 1990 and 1999, however were not used to generate sufficient employment over this period. So weak employment weakened consumption and aggregate demand, over this period, and weak wage induced transfers simply increased the share of capital and enterprise savings. The weak wages were not used to subsidise employment.

After 1999, employment has continued to be weak, but real urban wage growth has outstripped real GDP per capita growth. This implies that there have been transfers back to urban labour, but the weak employment effect has been paramount in keeping consumption and domestic aggregate demand weak.

The critical macro policy lesson here is that in China, the employment effect has been stronger than the real wage effect, although subsidised by it in the first reform period, in strengthening consumption and aggregate demand. Conversely, the employment effect has also been paramount, when weak employment weakened consumption and aggregate demand, even though real urban wages were stronger after 1999.

8. Policy Conclusions

Conclusions

China's very high GDP growth since embarking on its reforms in 1978 has had three main macro drivers of growth, consumption, investment, and exports. The main driver of GDP growth however changed over time from consumption to investment. This change makes it useful to categorise and analyse Chinese GDP growth into two periods. In the first reform period, from 1978 to approximately 1990, GDP growth was led by consumption. In the second reform period, from 1990 onwards, GDP growth was led by investment, followed by exports, with consumption falling into third place.

The already high GDP growth rate of near 10% per annum over the first reform period, picked up even further over the second reform period. On the surface then, there has been very little to worry about, with ever higher GDP growth being led by changing drivers. But there are macro concerns with the growth strategy chosen.

First has come the current financial crisis, knocking down GDP growth to 9% for 2008, and forecasts by the IMF for 2009 of a further reduction to 6.7%. The current downturn is based on both declining export and domestic demand, with the further reduction especially based on declining export demand from the US and the EU. The ILO has however been ahead of the curve on this, warning in the Asian Employment Forum in Beijing in August 2007, just before the sub prime mortgage crisis broke, that such high GDP growth could not be sustained on the expectation of continued high demand for Chinese and East Asian exports from the US and the EU. Domestic demand, and the driver of consumption had been neglected, and needed to be built up.

Second, the switch in drivers of GDP growth from consumption in the first reform period, to investment in the second reform period, had driven up investment to peak at near 50% of GDP. Neither GDP growth, nor investment could be driven much higher, or indeed sustained at existing levels.

Third, this growth strategy has still left a large jobs shortfall. Recent estimates of urban unemployment rates vary between 14 million and 20 million per annum. And the agricultural sector is estimated to have a labour surplus of 150 million, which will need to be moved to non agriculture. Since GDP growth cannot feasibly go much higher to generate more jobs to fill the gap, then growth needs to be more job rich.

This makes GDP growth based on an imbalance between the drivers of growth unsustainable. Examination of the imbalance shows it to result from two key macro variables, employment and real wages.

In the first reform period, from 1978 to 1990, employment increased to near full employment, SOEs performed well, inequality was relatively low, and the social security system was adequate. The real urban wage declined in trend over this period, and its growth remained below real GDP growth per capita. However the resulting transfer from labour to capital through this wage gap, was used to generate employment. Hence consumption was relatively high along with aggregate demand. Consumption was the major driver of GDP growth, generating demand for the second driver investment. And since domestic demand was relatively high, exports were a third driver of growth.

In the second reform period, from 1990 onwards, the drivers of growth change in their ranking, because employment and the real wage change. SOE reforms entailed massive retrenchment and increasing unemployment. Real wage growth however increased, but still stayed below real GDP growth per capita till about 1999. Only this time the transfers from urban labour to capital on account of the wage gap were not used to generate employment. Income inequality now increased significantly. The social security system was burdened, embarked on reforms, but its coverage was inadequate, prompting forced savings for contingencies. As a result consumption declined along with aggregate demand. The Asian financial crisis added to this deflation. Hence investment was increased to raise aggregate demand, along with exports.

The employment effect has been paramount in both reform periods, high employment driving up consumption and aggregate demand in the first reform period, and low employment driving down consumption and aggregate domestic demand in the second reform period. The real wage effect has not been so paramount. In the first reform period the declining real wage growth, and gap with real GDP per capita led to a transfer to capital, which worked indirectly to enhance employment. In the second reform period up to 1999 the rising real wage growth, but persistent gap with real GDP per capita growth has led to transfers to capital which has boosted enterprise savings rather than helping consumption.

The high reliance on exports has been based on very low ULCs relative to both developed and developing countries, and are in turn based on relatively low wage rates, high increases in productivity, and a managed exchange rate against the US Dollar. But the success in exports has attracted very high FDI which gives it a surplus on its capital account. And a very high savings rate has translated into a surplus on its current account. These twin surpluses it is argued also misallocate capital. On the one hand, China as a capital poor developing country exports capital, to be kept in US treasury bills earning a very low rate of return. On the other hand, it does not need the FDI inflows since its savings are much higher, but still pays a high rate of return on them.

Policy Recommendations

1. The imbalance between the drivers of GDP growth, consumption, and exports needs to be corrected. GDP growth has to be better balanced between domestic demand based on consumption, and external demand based on exports.
2. The imbalance between the drivers of GDP growth, consumption and investment also needs to be corrected. GDP growth has to be better balanced between consumption on the one hand and savings on the other. Investment should be led by a better balance between demand for consumption, and the supply of savings.
3. Consumption depends critically on employment and key conditions of employment like the real wage.
4. Hence employment and key conditions of employment like the real wage are not only end products of GDP growth, but also causal factors that determine the level and nature of GDP growth.
5. Savings and consumption also depend on social protection, whose adequacy lowers forced savings for contingencies, and increases consumption.
6. The twin surpluses, on the current account and the capital account, misallocate scarce capital to be invested in US Treasury bills, earning low rates of return, and should be invested domestically in human resource development to raise domestic productivity and earn higher social returns.

POSTSCRIPT

The Impact of the Global Financial Crisis on the Labour Market in China and Policy Response

INTEGRATION and ILO Beijing

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The Context of Growth and the Crisis in China

For 30 years post reform China has had the highest sustained GDP growth in the world, of near 10%. 200 million people have been lifted out of poverty. China's GDP is now 7% of global GDP, and ranks as the third largest economy. This GDP growth has been based largely on very high growth of investment and exports. Investment has peaked at 42% of the GDP. China's extremely competitive ULCs have recently attracted between \$60-\$70 billion FDI inflows per annum.

Despite such high and sustained GDP growth, managing the world's largest labour force in the world, of three quarters of a billion, has been challenging. By 2006 the urban registered unemployment rate was 4.2%, but the estimated unemployment rate approximated 7%-8%. A joint estimate by the Ministry of Human Resources and Social Security (MHRSS) and the ILO showed that 24 million new jobs were needed per annum, while the actual new jobs created were approximately 10 million, giving a jobs shortfall of 14 million per annum. MHRSS estimates that the jobs shortfall may have fallen to 12 million for 2007. Rural surplus labour in agriculture is estimated at 150 million.

The global financial crisis has affected China's GDP growth significantly. The National Bureau of Statistics (NBS) has estimated that GDP growth dropped from 13% per annum over 2007 to 9% per annum for 2008. For the last quarter of 2008, the NBS estimates that GDP growth slumped to 6.8%, compared to the last quarter of 2007.

The main channel through which the global crisis is hitting China is seen to be a collapse in demand, for exports, and domestic consumption. The global credit crunch is also expected to affect domestic credit and investment. End of the year manufacturing growth has fallen to 5% per annum, a fall from 17% in the previous year according to the NBS. Total exports have fallen for the first time in 7 years. In October 2008, FDI was negative.

The Impact of the Crisis on the Labour Market

Initial assessments of the impact of this transmission channel point to an impact on the labour market in the following areas:

- (a) With a third of the GDP reliant on exports, the crisis has hit export employment.
- (b) FDI based manufacturing employment has been hit.
- (c) Sectorally the crisis has first hit textiles, already affected by appreciation of the exchange rate over 2007-08 of 10%. More generally employment in the labour intensive industry has been hit first. This has also affected the services related to manufacturing.

(d) Regionally, the areas with a high concentration on export based employment like Guangdong and Fujien have been hit the hardest. Initial surveys show that in Fujien a third of the enterprises have shut down, while another third are making losses trying to survive.

(e) Within the labour market, the transmission channel of the crisis is observed to be through a very high impact on:

(i) Migrants from rural areas, of whom there are some 130 million. Both the NBS and the MHRSS estimates that some 10 million migrants had returned back to rural areas at the end of December 2008¹⁸. Their return back to rural areas, with no jobs, an already surplus rural labour market, and weak social protection, will put great pressure on rural areas.

(ii) Fresh graduates entering the labour market, of whom there are some 7 million per annum.

(f) The Chinese Academy of Social Sciences (CASS) expects the urban registered unemployment rate to rise to 5% over 2009, from its current 4.2%. However if the primary transmission mechanism within the labour market is through migrants who are not covered by urban registered unemployment, this will understate the larger impact on unemployment, and its focus which is return migration, and the need for policy support for them.

(g) This will strain the existing social security system.

Early Policy Response

As a result of the impact of the global crisis on the Chinese economy, the historic Work Conference in December 2008, which should have been celebrating 30 years of reform, was a somber concatenation to carve out opportunity from crisis. In this Work Conference 30 years ago, to the month, Deng Ziao Ping gained the mandate for reforms, because he said, socialism did not imply poverty. Engels may not have flown in a plane, or Stalin worn dacron, but reform was much needed, through a cautious crossing the stream by feeling the stones.

The government's policy reform announced by the National Development Reform Commission, is based on monetary, fiscal and employment policies.

1. A government stimulus package of RNB 100 billion by end 2008, leading to a RNB 4 trillion package (\$ 500 billion) over 2009-10.
2. GDP growth will be maintained at 8% over 2009.
3. 9 million new jobs will be created over 2009 to keep employment growth constant.
4. The minimum wage will be held constant over 2009.
5. The government has increased its investment abroad in US Treasury bills by another \$50 billion in December 2008, with China currently the largest holder of US debt of two thirds of a trillion Dollars.

The MHRSS is putting forward a specific policy package for the labour market, based on:

- Increasing enterprise survival by reducing their responsibilities through transferring some of their social security contributions to the government

¹⁸ The number of jobless migrants returning home may be conflated with migrants returning home for the traditional Chinese new year in January 2009.

- Subsidising enterprises that do not retrench labour
- Employment services, training and SIYB for return migrants

Mr. Lu Mai from Chinese Development Reform Foundation has proposed to the Prime Minister an increase in domestic consumption and domestic demand by phased expansion of a social protection package. This is based on an ongoing collaborative study with the ILO on the role of a social floor for growth and welfare.

CASS and the ILO support the need for generating growth through a better balance between its drivers, exports based on productivity, and consumption based on employment and decent work.

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Tables

Table 1a. Growth of Output, China (average annual % growth)

	1990-2000	2000-06
GDP	10.6	9.8
Agriculture	4.1	4.2
Industry	13.7	11.2
Manufacturing	12.9	11.1
Services	10.2	10.1

Table 1b. Structure of Output, China (% of GDP)

	1980	1990	1995	2006
Agriculture	30	27	20	12
Industry	49	42	47	48
(of which Manufacturing is)	40	33	34	33
Services	21	31	33	40

Source: World Development Indicators 2008

Table 2. China's Employment composition

年 份	Eco-active Population (10 thousands)	Empl. (10 thousands)			composition			
		primary	secondary	tertiary	primary	secondary	tertiary	
1952	21106	20729	17317	1531	1881	83.5	7.4	9.1
1957	23971	23771	19309	2142	2320	81.2	9.0	9.8
1962		25910	21276	2059	2575	82.1	8.0	9.9
1965		28670	23396	2408	2866	81.6	8.4	10.0
1970		34432	27811	3518	3103	80.8	10.2	9.0
1975		38168	29456	5152	3560	77.2	13.5	9.3
1978	40682	40152	28318	6945	4890	70.5	17.3	12.2
1979	41592	41024	28634	7214	5177	69.8	17.6	12.6
1980	42903	42361	29122	7707	5532	68.7	18.2	13.1
1981	44165	43725	29777	8003	5945	68.1	18.3	13.6
1982	45674	45295	30859	8346	6090	68.1	18.4	13.5
1983	46707	46436	31151	8679	6606	67.1	18.7	14.2
1984	48433	48197	30868	9590	7739	64.0	19.9	16.1
1985	50112	49873	31130	10384	8359	62.4	20.8	16.8
1986	51546	51282	31254	11216	8811	60.9	21.9	17.2
1987	53060	52783	31663	11726	9395	60.0	22.2	17.8
1988	54630	54334	32249	12152	9933	59.3	22.4	18.3
1989	55707	55329	33225	11976	10129	60.1	21.6	18.3
1990	65323	64749	38914	13856	11979	60.1	21.4	18.5
1991	66091	65491	39098	14015	12378	59.7	21.4	18.9
1992	66782	66152	38699	14355	13098	58.5	21.7	19.8
1993	67468	66808	37680	14965	14163	56.4	22.4	21.2
1994	68135	67455	36628	15312	15515	54.3	22.7	23.0
1995	68855	68065	35530	15655	16880	52.2	23.0	24.8
1996	69765	68950	34820	16203	17927	50.5	23.5	26.0
1997	70800	69820	34840	16547	18432	49.9	23.7	26.4
1998	72087	70637	35177	16600	18860	49.8	23.5	26.7
1999	72791	71394	35768	16421	19205	50.1	23.0	26.9
2000	73992	72085	36043	16219	19823	50.0	22.5	27.5
2001	74432	73025	36513	16284	20228	50.0	22.3	27.7
2002	75360	73740	36870	15780	21090	50.0	21.4	28.6
2003	76075	74432	36546	16077	21809	49.1	21.6	29.3
2004	76823	75200	35269	16920	23011	46.9	22.5	30.6
2005	77877	75825	33970	18084	23771	44.8	23.8	31.4
2006		76400						

Source: China Statistical Yearbook, various issues, National Statistic Bureau.

Table 3: Labour Market Trends 1995-2004

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Population (million)	1211.2	1223.9	1236.3	1248.1	1259.1	1265.8	1276.3	1284.5	1292.3	1299.9
Rural	859.5	864.4	866.4	868.7	870.2	807.4	795.6	782.4	768.5	757.1
Urban	351.7	359.5	369.9	379.4	388.9	458.4	480.6	502.1	523.8	542.8
Economically active population(million)	687.4	696.7	705.8	714.1	719.8		744.3	753.6	760.8	
Total employed (million)	679.5	688.5	696.0	699.6	705.9	711.5	730.3	737.4	744.3	752.0
By Sector(%)										
Agriculture	52.2	50.5	49.9	49.8	50.1	50.0	50.0			
Industry	23.0	23.5	23.7	23.5	23.0	22.5	22.3		27.2	27.1
Services	24.8	26.0	26.4	26.7	26.9	27.5	27.7			
By area (%)										
Rural (%)	71.9	71.2	71.0	70.4	70.2	70.1	72.3			64.8
Urban(%)	28.1	28.8	29.0	29.6	26.8	29.9	27.7			35.3
Urban (million)	190.9	198.2	202.1	206.8	210.1	212.7	202.3			264.8
Urban unemployment(million)										
Registered as unemployed	5.2	5.5	5.7	5.7	5.8	6.0	6.8	7.8	8.0	8.3
Unemployment rate(%)	2.9	3.0	3.1	3.3	3.1	3.1	3.6	4.0	4.3	4.2
Laid off(xiagang) workers(million)			9.9	9.0	9.4	8.6	7.1			13.0
Laid off workers remaining unemployed(%)			40.0	50.0	60.0					
Laid off workers remaining unemployed(million)				4.0	5.6	6.4				1.5
Laid off workers as % of total urban employment				2.0	2.7	3.0				
Adjusted unemployment rate(%)				8.5	8.5	8.2				
Urban job seekers(million)										24.0
Unemployed										15.0
Farmers shifting to Demobilised army										0.5
Jobs shortfall(million)										14
Rural unemployment (estimated, million)					100.0					
Rural surplus labour(million)										150.0

Source: NBS 2000,2001 and 2002, ADB 2004, NBS 2005 and MOLSS 2005

Table 4: Mean Share in Growth for 1980-1990, and 1990-2004

Country	GDP growth (%)		Consumption/GDP growth(%)		Government spending/GDP growth(%)		Investment/GDP growth(%)		Exports/GDP growth(%)		Imports/GDP growth(%)	
	1980-1990	1990-2004	1980-1990	1990-2004	1980-1990	1990-2004	1980-1990	1990-2004	1980-1990	1990-2004	1980-1990	1990-2004
China	8.88	9.64	3.82	3.62	1.22	1.41	3.29	4.40	2.23	3.77	1.67	3.56

Source: Calculated from WDI 2008 & various issues

Table 5: The Contributions of Factors of Production to the GDP Growth

authors	period	Growth rate	Capital	Labor	TFP
Maddison -1998	1978- 1995	7.5	49	21	30
Chow and Li (2000)	1978- 1998	9.3	55	13	32
Wu (2002)	1980- 2004	9.5	52	11	37
Hu and Khan (1997)	1979- 1994	9.3	46	13	41
Swamy (2003)	1980- 1997	10	39	16	45
World Bank (1997)	1978- 1995	9.4	37	17	46
Bosworth and Collins (2003)	1980- 1990	9.2	23	31	46
Bosworth and Collins (2003)	1990- 2000	10.1	32	18	50
Zhang and Shi (2003)	1978- 1989				28.9
Hu (2003)	1995- 2001		57.6- 86.3	4.39- 2.93 ^[1]	3.9- 27.8
Xiang Ao, Fulginiti and Lilyan (2003)					38.7
Wang and Yao (2003)	1978- 1999		47.7	15.9	25.4 ^[2]
Sun and Ren (2005)	1981- 2002				34.6
Rawski (2006)	1978- 2004				29
Cai (2006)	Since reform		28	24	48
Kuijs (2006)	1978- 1993		46	13	40
Kuijs (2006)	1993- 2005		61	6	32

[\[1\]](#) Contribution by human capital is 6.83-10.24%.

[\[2\]](#) Contribution by human capital is 11%.

Table 6: Employment by Ownership Sectors (10,000 persons)

	1980	1985	1990	1995	2000	2005
Urban total	10525	12808	17041	19040	23151	27331
State units	8019	8990	10346	11261	8102	6488
	(76%)	(70%)	(61%)	(59%)	(35%)	(24%)
Collective units	2425	3324	3549	3147	1499	810
	(23%)	(26%)	(21%)	(17%)	(6%)	(3%)
Rural total	31836	37065	47708	49025	48934	48494
TVEs	3000	6979	9265	12862	12820	14272
	(9%)	(19%)	(19%)	(26%)	(26%)	(29%)

Sources: National Bureau of Statistics, *China Statistical Yearbook*, various issues.

Notes: Figures in parentheses are percentage shares in the relevant sub-totals. TVEs = township and village enterprises.

Table 7: Gini Index

	1978	1992	2000	2004
China National	0.47
China Rural	0.21	0.31	0.35	..
China Urban	0.16	0.25	0.32	..

Source:

Table 8. Wages and Unit Labor Costs in Manufacturing: Comparison between China and Selected Developed and Developing Economies, 1998

Economy	Ratio to Chinese Wage Level
United States	47.8
Sweden	35.6
Japan	29.9
Singapore	23.4
Taiwan (China)	20.6
Republic of Korea	12.9
Chile	12.5
Mexico	7.8
Turkey	7.5
Malaysia	5.2
Philippines (1997)	4.1
Bolivia	3.7
Egypt	2.8
Kenya	2.6
Indonesia (1996)	2.2
Zimbabwe	2.2
India	1.5

Source: Trade and Development Report, 2002, p.158

Table 9. Hourly Compensation costs for Manufacturing Workers 2005

Economies	Compensation (US\$)	Changes from 1999 (%)
China	0.67	
Korea	13.56	86
Mexico	2.62	55
USA	23.65	38
H.K.	5.65	18
Germany	33	9.6
Taiwan	6.38	6.5
Japan	21.76	-7.3

Source: W. J. June 12, 2005

Table 10: The Growth Rate of Total Factor Productivity (TFP) of China's Industries (%) (1998-2002)

Industries	1998	1999	2000	2001	2002
Total	0.79	0.85	0.96	1.03	1.16
Mining	1.02	0.86	0.88	0.93	1.09
Extraction of Petroleum and Natural gas	1.08	0.93	1.27	1.01	0.93
Mining and Processing of Ferrous Metal Ores	0.78	1.03	1.08	1.19	1.12
Mining and Processing of Non-Ferrous Metal Ores	0.77	0.99	1.08	1.02	0.93
Mining and Processing of Non metal Ores	0.97	1	0.89	0.91	1.03
Other Mining	1.66	0.78	0.99	0.96	0.49
Timber and Timber Processing	1.09	1	1	1.15	1.17
Food Processing	0.55	0.63	0.71	0.82	1
Manufacture of Food	0.95	0.96	1.09	1.1	1.15
Manufacture of Beverage	0.93	0.95	0.99	1.02	1.09
Tobacco	1.1	1.01	1.02	1.14	1.41
Textile	0.88	0.96	1.11	1.13	1.19
Textile Wearing Apparel. Footwear, and Caps	0.95	1	1.11	1.19	1.19
Leather, Fur, Feather and Related Products	0.69	0.73	0.84	1	1.19
Process of Timber Wood, Bamboo and Rattan Products	0.9	1	1.03	1.12	1.17
Furniture	1.02	0.95	1.01	1.14	1.17
Paper and Paper Products	0.89	0.94	0.93	0.96	1.09
Printing, Reproduction of Recording media	1.08	1.03	0.97	0.94	1.07
Products for Culture, Education and Sport Activity	0.99	0.96	1.03	1.12	1.13
Processing of Petroleum. Coking, Processing of Nuclear fuel	1.03	0.82	1.03	1	1.12
Chemical materials and Products	0.87	0.88	0.98	1.05	1.15
Drug	0.87	0.99	1.11	1.13	1.14
Chemical Fibers	0.71	0.84	1.06	1.14	1.23
Rubber	0.92	0.89	1	1.06	1.21
Plastics	0.91	0.93	1.05	1.1	1.19
Non-Metallic Mineral Products	0.97	1	1.07	1.13	1.11
Smelting and Pressing of Ferrous Metals	1.01	0.9	0.95	1.01	1.14
Smelting and Pressing of Non-Ferrous Metals	0.79	0.98	1.16	1.21	1.04
Metal Products	0.87	0.93	1.02	1.1	1.26
General Purpose Machinery	1.01	1.04	1.07	1.17	1.21
Special Purpose Machinery	0.86	0.92	1.05	1.15	1.38
Transportation Equipment	1.06	1.03	0.98	1.08	1.29
Electrical Machinery and Equipment	0.95	1.01	1.15	1.16	1.24
Communication equipment, Computers and Other Electronic Products	1.02	1.05	1.19	1.07	1.15
Measuring instrument and Machinery for office works	0.84	0.92	1.11	1.14	1.21
Other Manufacturer	1	1.02	1.1	1.14	1.19
Electric Power	0.82	0.89	0.82	0.89	0.97
Production and Distribution of Gas	0.49	1.19	0.89	1.21	1.04
Production and Distribution of Running Water	0.76	0.83	0.83	0.85	0.84
All Manufacturers	0.77	0.83	0.96	1.07	1.24

Source : Estimated by Wang Ling, Institute of World Economics and Politics, based on "China Statistic Year Book" (1999-2003) , China Statistic Press, Beijing.

Table 11: Some Main Statistics of China's Export Sector, 1998-2002 (10 thousand workers, constant prices)

	Overseas Chinese capital	Foreign Capital	Financial cost	Operation profits	Subsidy income	Gross Industrial products	Sale value	Intermediate inputs	employment
The Entire Export Sector									
1998	616	893	452	321	39	14017	14717	11736	2208
1999	679	974	401	522	40	15486	15706	12343	2172
2000	777	1199	377	972	52	19784	20168	15783	2419
2001	891	1298	329	1001	57	21807	21542	16785	2389
2002	991	1613	365	1395	64	27253	26434	20438	2608
Industrial export sectors									
1998	587	850	430	306	37	13348	14015	11176	1297
1999	649	932	383	499	38	14820	15030	11812	1256
2000	747	1153	362	934	50	19025	19395	15177	1346
2001	860	1252	317	965	55	21030	20774	16187	1324
2002	958	1561	353	1349	62	26367	25575	19774	1395
Large scale industrial enterprises									
1998	434	629	318	226	27	9875	10368	8268	744
1999	480	689	284	369	28	10959	11114	8735	689
2000	543	838	263	679	36	13826	14095	11029	707
2001	651	947	240	731	41	15916	15723	12251	701
2002	730	1189	269	1028	48	20095	19492	15070	766
Middle and small -sized enterprises									
1998	153	221	112	80	10	3474	3647	2908	524
1999	169	243	100	130	10	3861	3916	3078	535
2000	204	315	99	255	14	5199	5300	4148	643
2001	209	304	77	235	13	5113	5051	3936	584
2002	228	371	84	321	15	6271	6083	4703	611
Non-industrial export sectors									
1998	29	43	22	15	2	669	702	560	304
1999	29	42	17	22	2	666	676	531	277
2000	30	46	14	37	2	759	774	605	300
2001	32	46	12	36	2	778	768	599	286
2002	32	52	12	45	2	886	859	664	298

Source: Calculated by Yao Zhizhong and his team, Institute of World Economics and Politics. Update is needed.

Table 12: Indices of China's Real GDP, Employment and Labor Force

	(a) Real GDP	(b) Employment	(c) Labor Force	(a)-(b)	(b)-(c)
1978	100.00	100.00	100.00	0.00	0.00
1980	116.00	105.50	105.46	10.50	0.04
1985	192.90	124.21	123.18	68.69	1.03
1990	281.70	161.26	160.57	120.44	0.69
1995	502.30	169.52	169.25	332.78	0.27
2000	759.90	179.53	181.88	580.37	-2.35
2005	1195.50	188.84	191.43	1006.66	-2.58
2006	1323.42	190.28	...	1133.14	...

Sources: National Bureau of Statistics, *China Statistical Yearbook 2006*; National Bureau of Statistics, *Statistical Communiqué of National Economic and Social Development in 2006*, www.stats.gov.cn.

Table 13. Urban Employment

	Working-age population (10,000)	Economically-active population (10,000)	Labor participation rate (%)	Employment (10,000)	Estimated unemployment rate (%)	Registered unemployment rate (%)
1978	10347.0	10044	97.1	9514	5.3	5.3
1979	11189.5	10567	94.4	9999	5.4	5.4
1980	11579.7	11067	95.6	10525	4.9	4.9
1981	12203.5	11493	94.2	11053	3.8	3.8
1982	13210.2	11807	89.4	11428	3.2	3.2
1983	13843.3	12017	86.8	11746	2.3	2.3
1984	15082.7	12465	82.6	12229	1.9	1.9
1985	15922.1	13047	81.9	12808	1.8	1.8
1986	16900.6	13556	80.2	13293	2.0	2.0
1987	17918.9	14060	78.5	13783	2.0	2.0
1988	18744.3	14563	77.7	14267	2.0	2.0
1989	19511.2	14768	75.7	14390	2.6	2.6
1990	20140.1	17615	87.5	17041	3.3	2.5
1991	20812.4	18065	86.8	17465	3.3	2.3
1992	21460.7	18491	86.2	17861	3.4	2.3
1993	22129.7	18922	85.5	18262	3.5	2.6
1994	22883.0	19333	84.5	18653	3.5	2.8
1995	23636.9	19830	83.9	19040	4.0	2.9
1996	25068.3	20737	82.7	19922	3.9	3.0
1997	26821.4	21761	81.1	20781	4.5	3.1
1998	28401.6	23066	81.2	21616	6.3	3.1
1999	29932.4	23809	79.5	22412	5.9	3.1
2000	32180.1	25058	77.9	23151	7.6	3.1
2001	33640.0	25347	75.3	23940	5.6	3.6
2002	35424.6	26400	74.5	24780	6.1	4.0
2003	37365.0	27282	73.0	25639	6.0	4.3
2004	39192.3	28099	71.7	26476	5.8	4.2
2005	40472.6	29383	72.6	27331	7.0	4.2

Sources: Calculation based on data from National Bureau of Statistics, *China Statistical Yearbook*, various issues.

Table 14: Elasticity of Employment with Respect to Economic Growth

	Average annual real growth rate of output (%)	Average annual growth elasticity of labor employment
	Total	Total
1979-1989	9.6	0.34
1991-1996	11.9	0.09
1997-2002	8.4	0.13
2003-2005	10.1	0.09

Sources: Calculation based on data from National Bureau of Statistics, *China Statistical Yearbook*, various issues.

Table 15: Changes in Sources of GDP Growth (1983 to 2003)

	1983-1988	1988-1993	1993-1998	1998-2003	2003	1993-2003 relative to1993-1983
GDP	12.1	8.9	9.8	8.0	9.1	-1.5
Employment	1.5	1.0	0.3	0.3	0.4	-0.9
Capital	5.0	4.5	5.5	4.9	5.5	0.4
Residual	5.6	3.4	4.1	2.8	3.1	-1.4
Of which						
Sectoral change	2.2	0.8	-0.3	0.5	0.7	-1.4
Education	1.0	0.9	0.9	1.1	0.8	0.0
Multi factor	2.4	1.7	3.4	1.3	1.6	0.3

productivity

Source: OECD analysis. OECD Economic Surveys: China, 2005/13-September 2005. Paris.

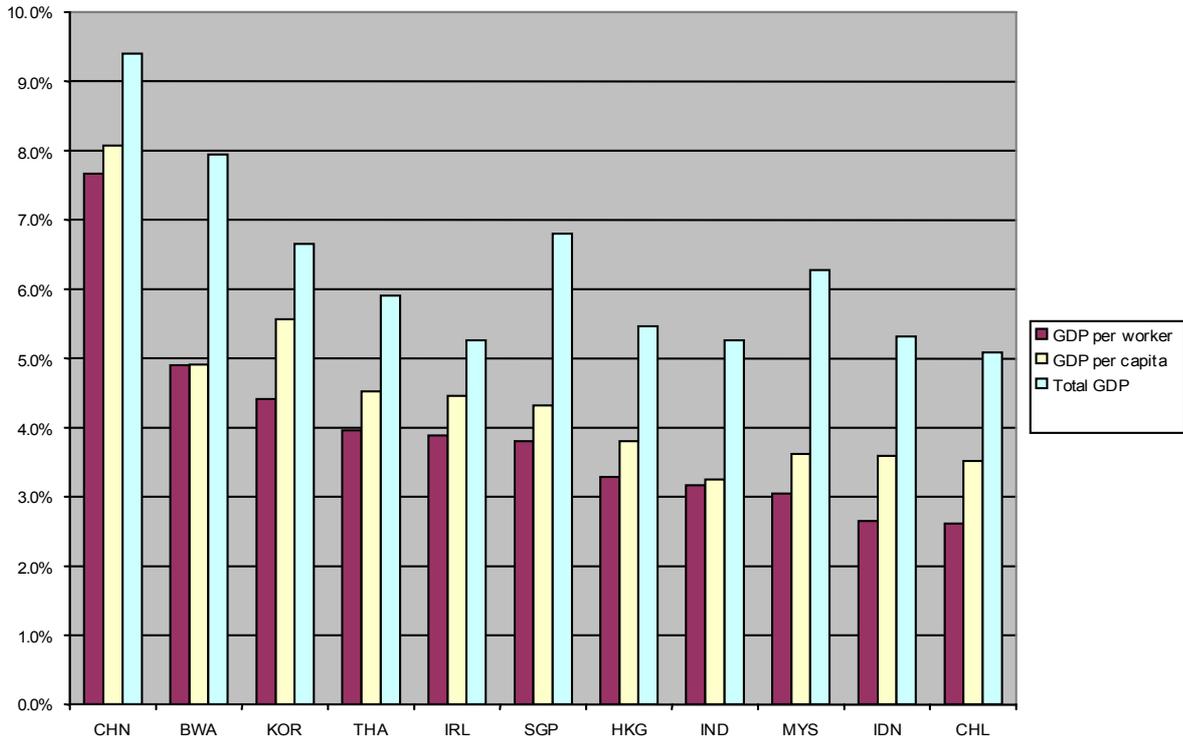
Table 16: Saving and Distribution of Savings Across Sectors %

Years	National saving	Household saving	Government saving	Shares of Saving of Different Sectors			
				Households	Gov.	Nonfinancial enterprises	Financial enterprises
1992	40.3	32.6	32.0	56.1	15.3	27.9	0.8
1993	41.9	33.4	33.0	54.0	15.2	30.0	0.8
1994	43.1	33.8	31.7	52.5	13.7	33.0	0.8
1995	41.8	31.4	33.6	51.0	14.0	35.2	-0.1
1996	40.3	30.8	31.7	52.9	13.5	31.4	2.2
1997	40.8	30.5	32.3	50.9	13.8	34.3	1.0
1998	40.0	29.9	30.0	51.0	13.2	34.3	1.5
1999	38.6	27.6	31.0	48.0	14.9	35.6	1.4
2000	38.5	25.5	32.5	42.9	16.5	39.1	1.5
2001	38.9	25.4	35.9	41.6	19.5	38.2	0.8

Sources : China Statistical Yearbook 1999-2004 年. Made by He Xinhua

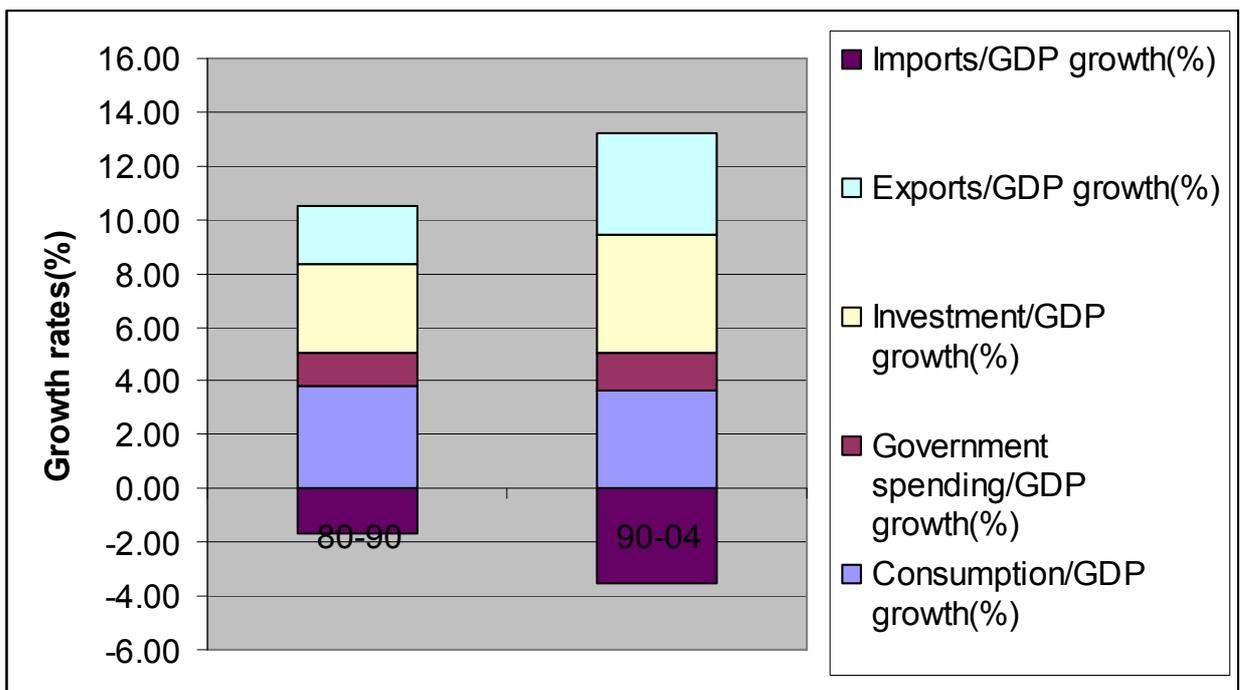
Figures

Figure 1 China: Fastest Growing Country in the World since 1978



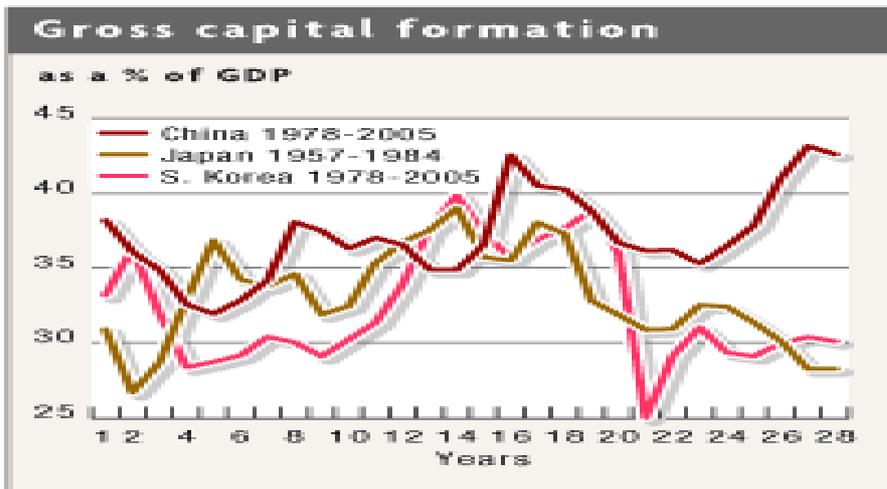
Source: Hauseman, 2005.

Figure 2. China Mean Shares in Growth



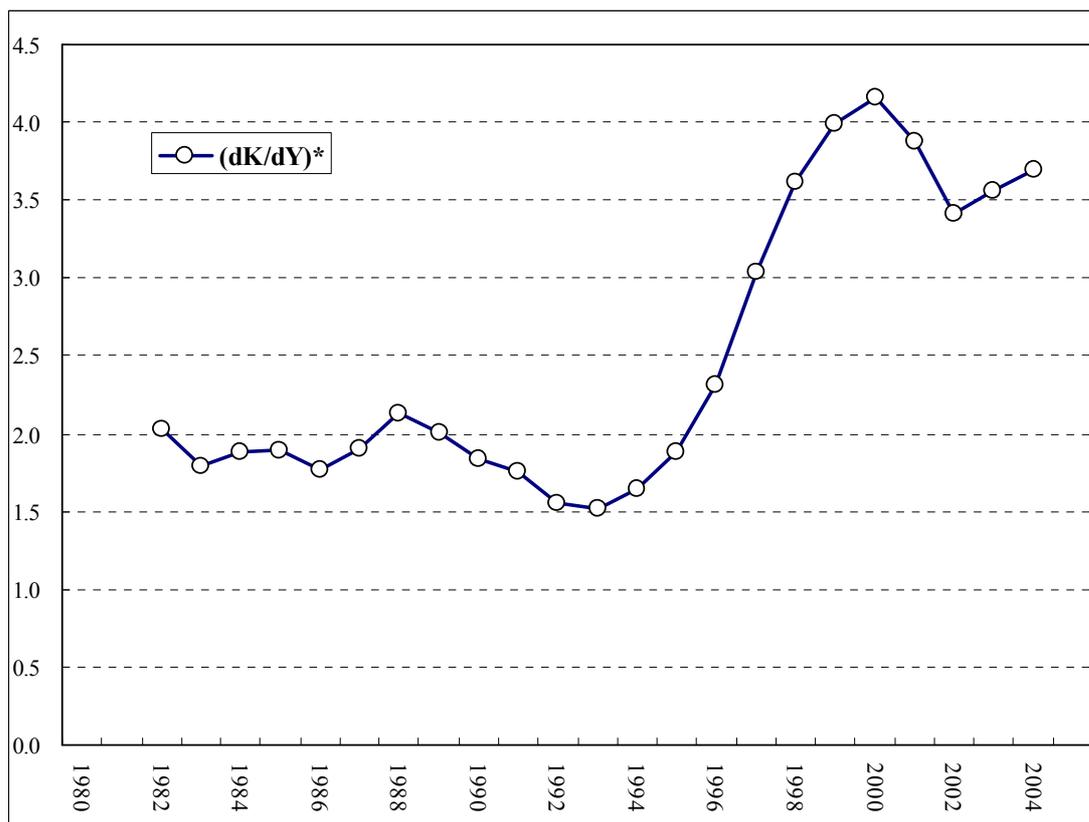
Source: Calculated by WDI 2008 & WDI 2006

Figure 3 : International Comparison of Gross Capital Formation



Sources: Financial time

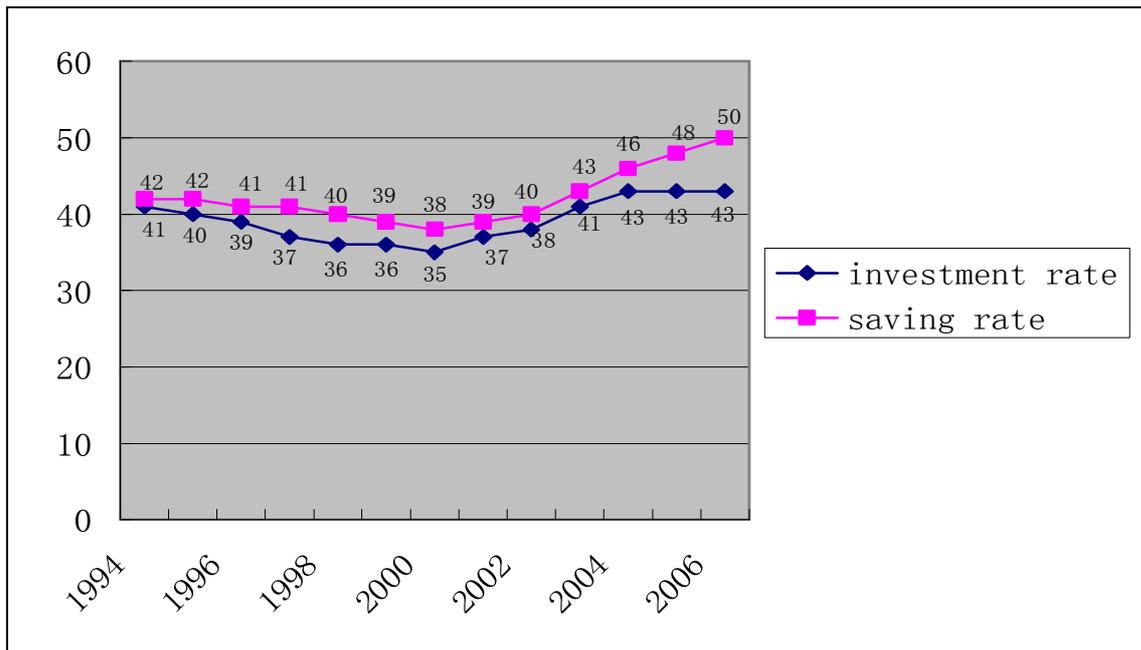
Figure 4. Incremental Capital-Output Ratio (5-Year Moving Averages)



Sources: National Bureau of Statistics, *China Statistical Yearbook 2006*; National Bureau of Statistics, *Statistical Communiqué of National Economic and Social Development in 2006*, www.stats.gov.cn.

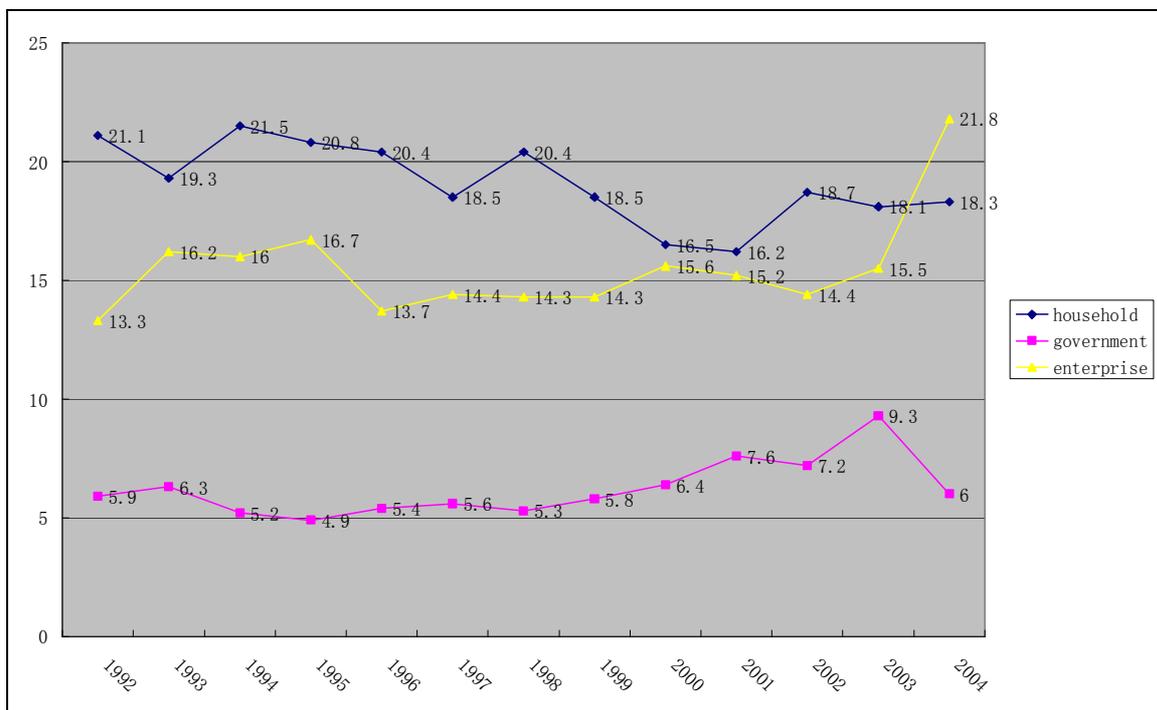
Note: Incremental Capital-Output Ratio = dK/dY , where dK = total fixed-asset investment, dY = GDP of current year minus GDP of last year.

Figure 5. China's saving rate vis-à-vis investment rate



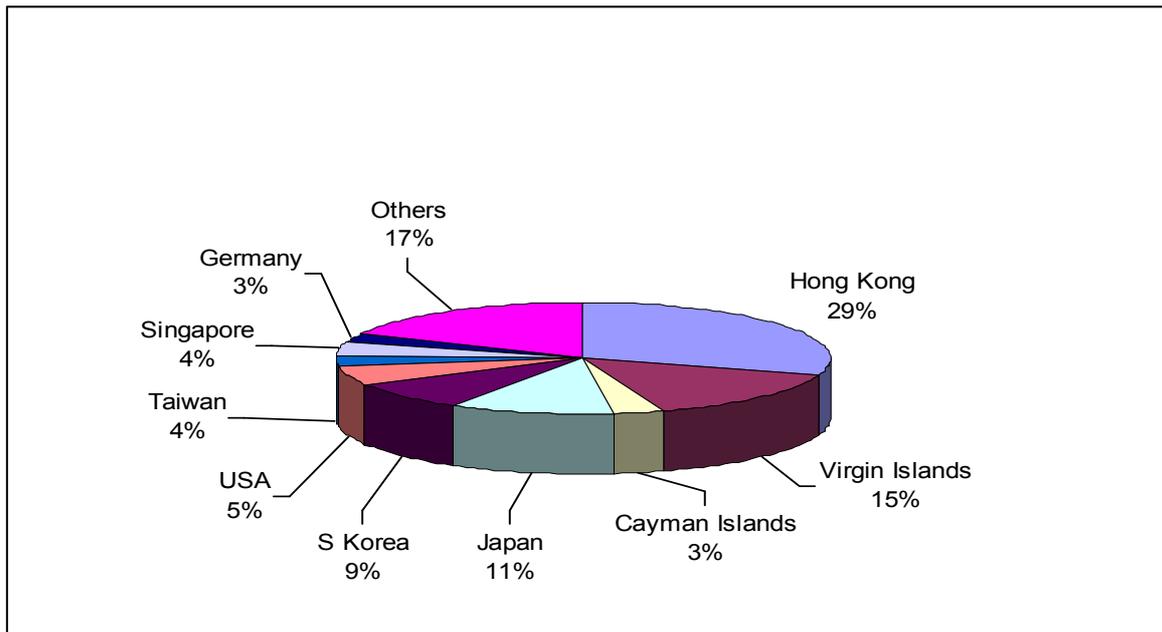
Sources: China Statistics Yearbook, various issues, National Bureau of Statistics.

Figure 6. Saving rates of different sectors in China (%)



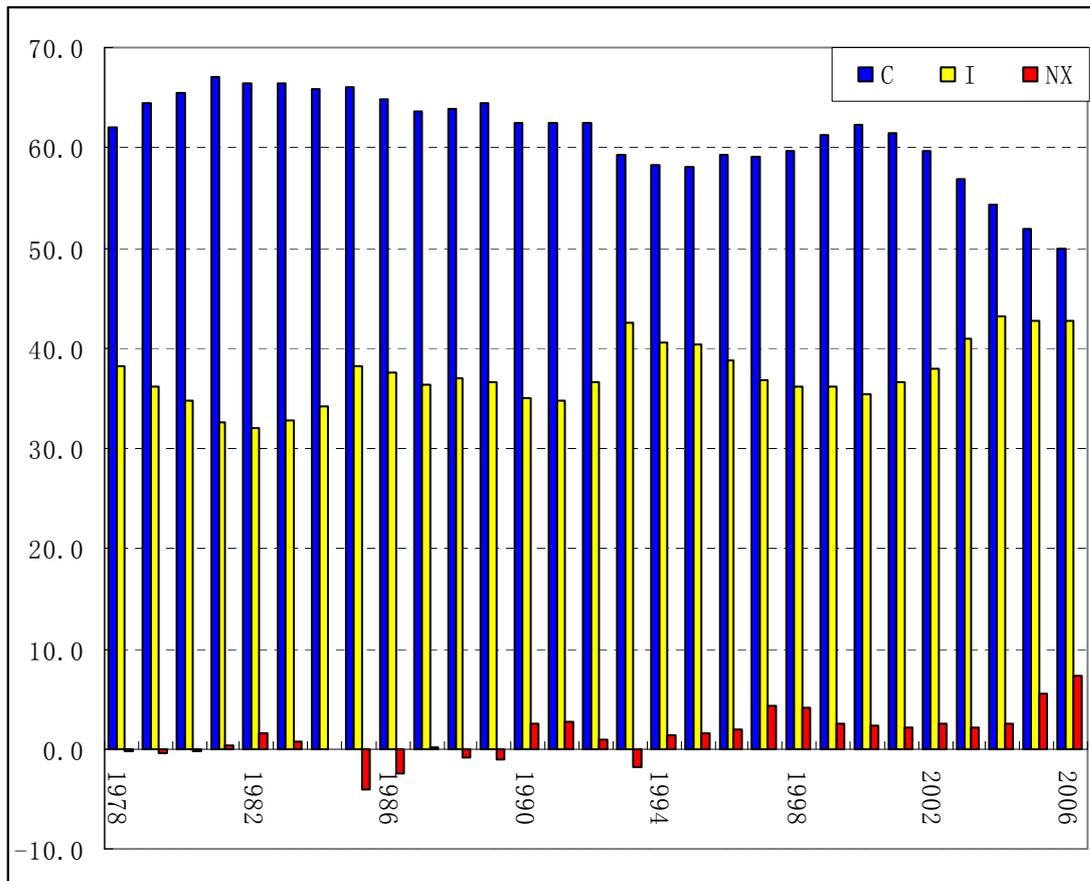
Sources: China Statistics Yearbook, various issues, National Bureau of Statistics.

Figure 7. The Share of China's Top Ten FDI Source Countries and Regions (2005)



Note: FDI inflows in China in 2005 were US\$60.33 billion.

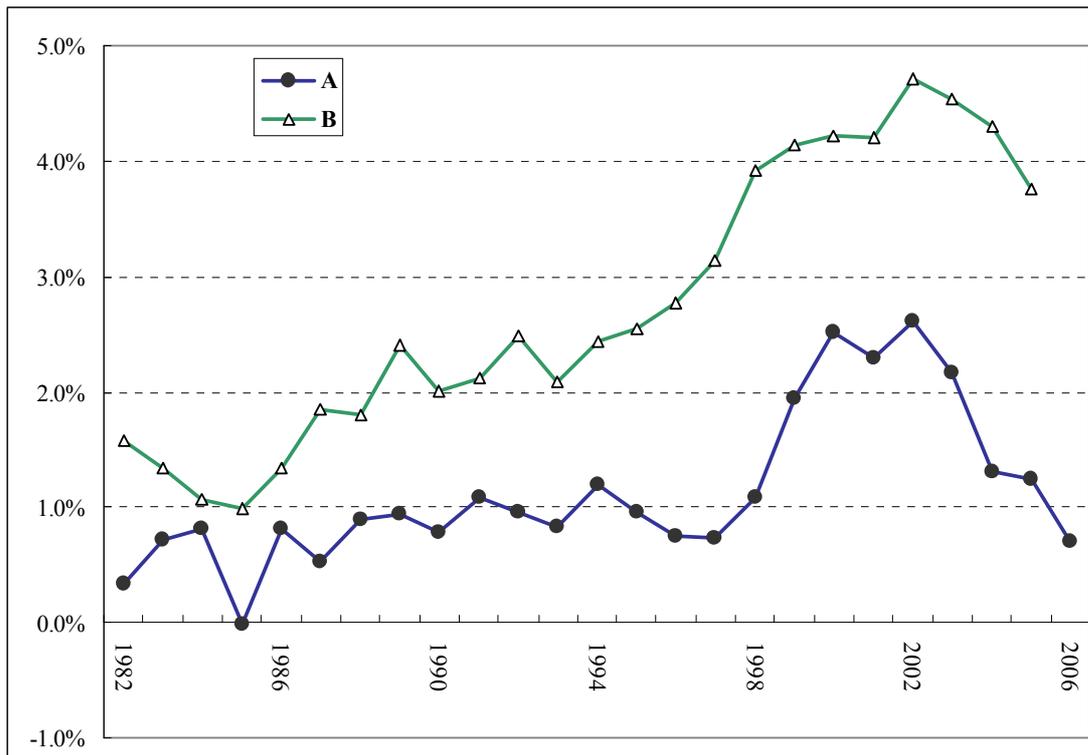
Figure 8. Composition of GDP by Expenditures (%)



Sources: National Bureau of Statistics, *China Statistical Yearbook 2006*; National Bureau of Statistics, *China Statistical Abstract 2007*.

Note: C = final consumption; I = investment; NX = net export of goods and services.

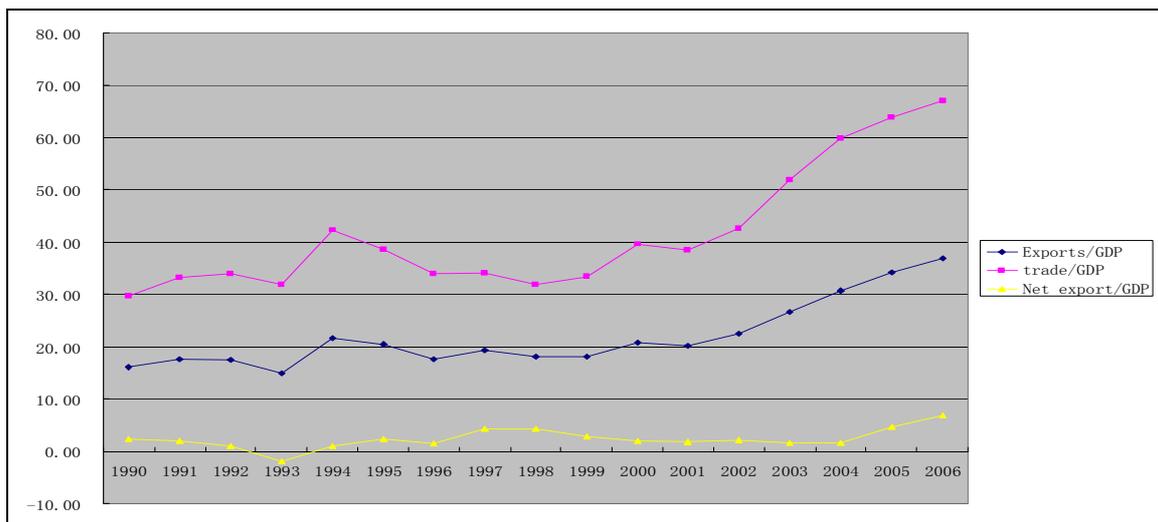
Figure 9. Budget Deficits and Government Debt Issuing as Percent of GDP



Sources: National Bureau of Statistics, *China Statistical Yearbook 2006*; National Bureau of Statistics, *China Statistical Abstract 2007*.

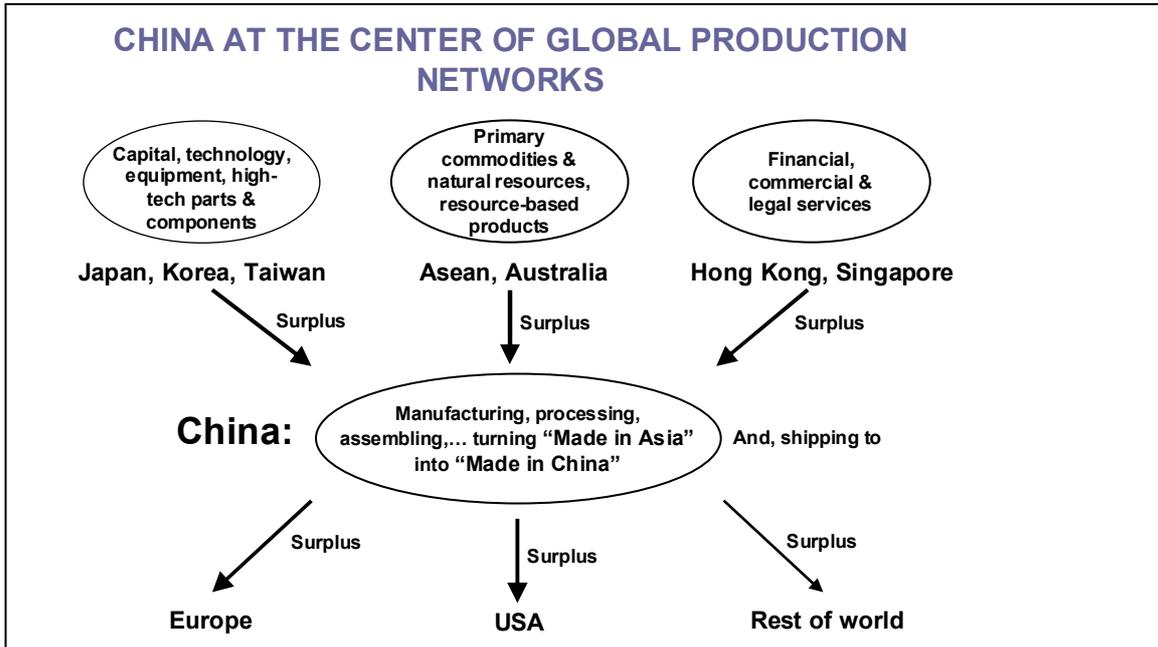
Note: A = budget deficits as percent of GDP; B = government debt issuing as percent of GDP.

Figure 10. The Importance of China's Trade in the Chinese Economy



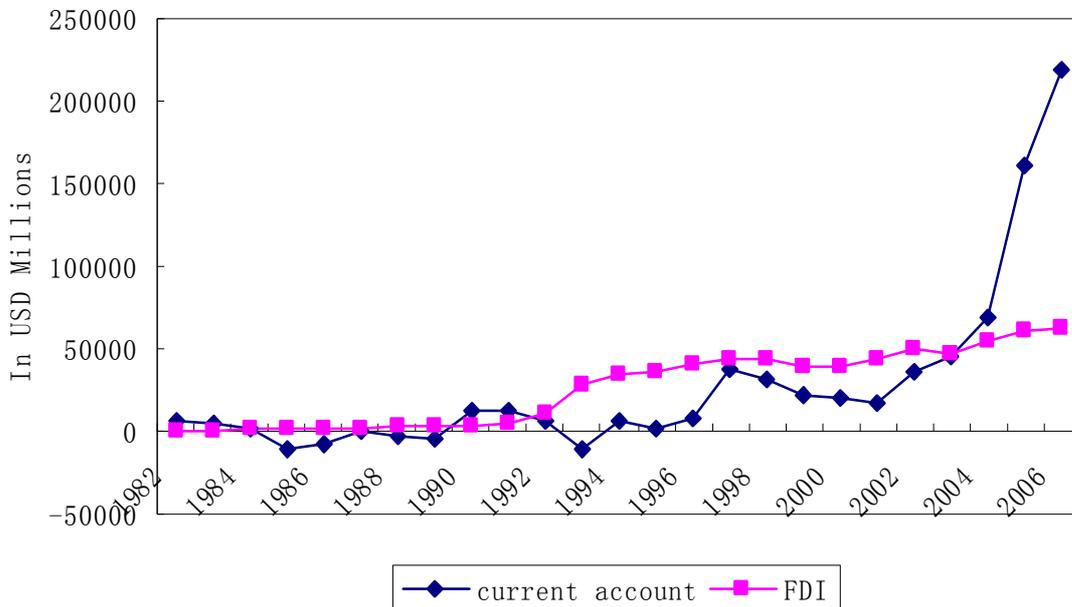
Sources: China Statistical Yearbook, 2006, and The monthly Bulletin of the Chinese Economy, No. 2 and 2007.

Figure 11.



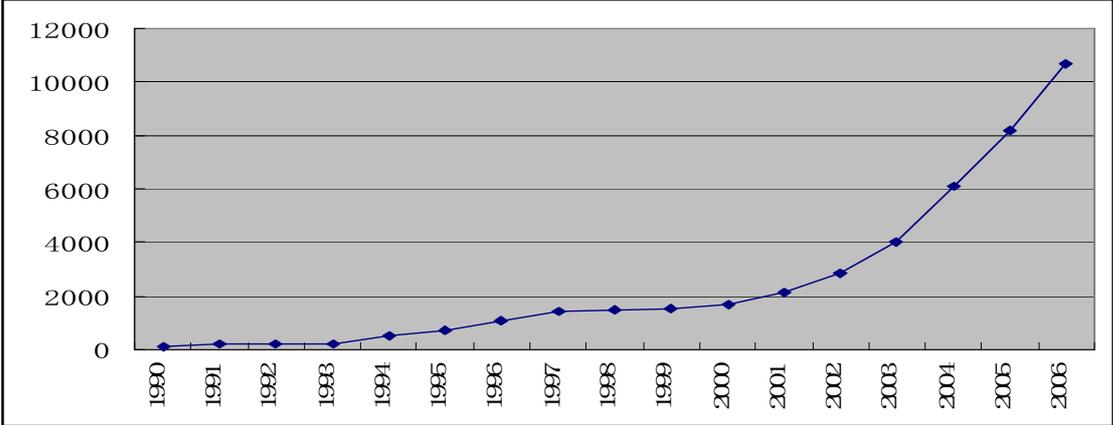
Source: John Wong, EAI, NUS, March, 2006.

Figure 12. China's Twin Surpluses



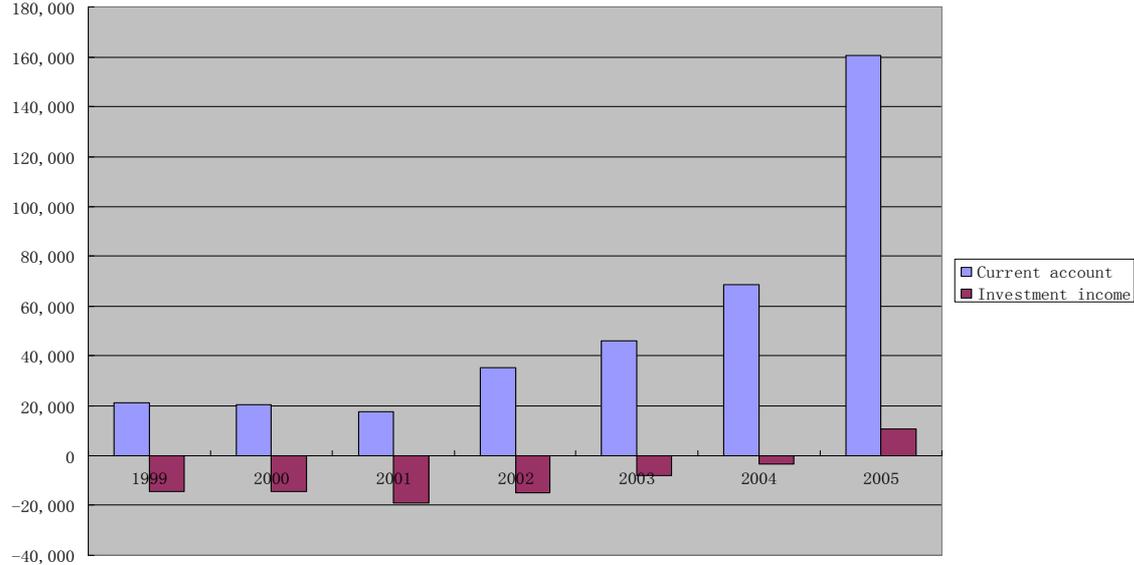
Source: Yong Ding, Y (2008)

Figure 13. China's Foreign Exchange Reserves



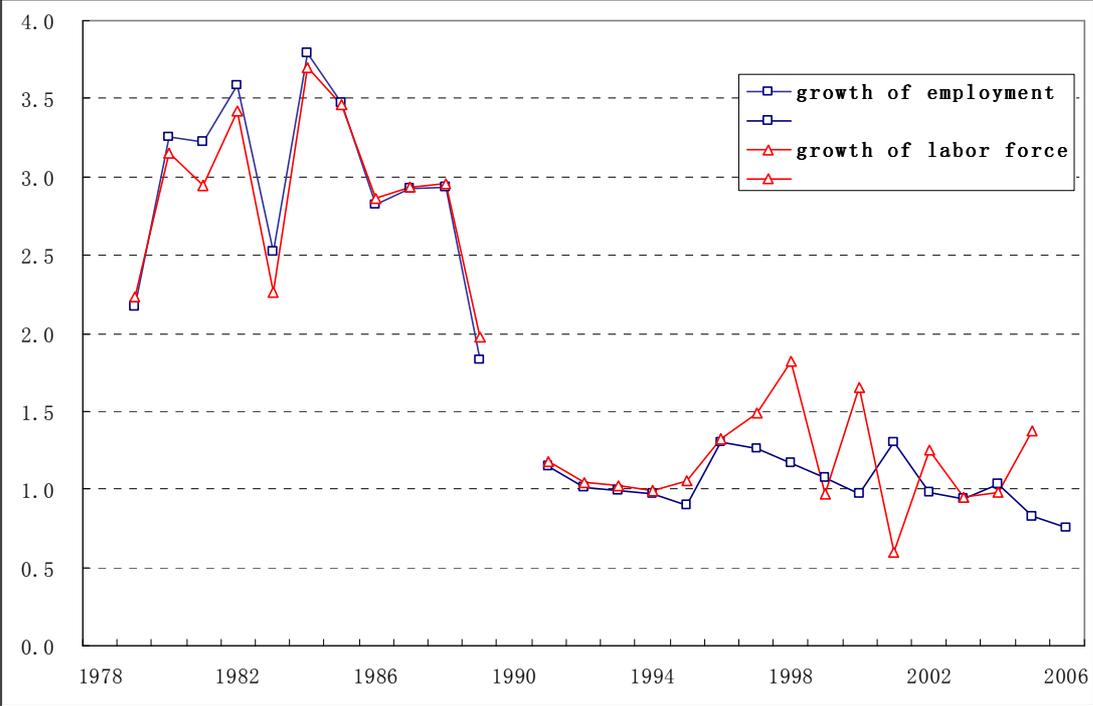
Source: Yong Ding, Y (2008)

Figure 14. China's current account surplus and investment account deficit (Unit:million US dollars)



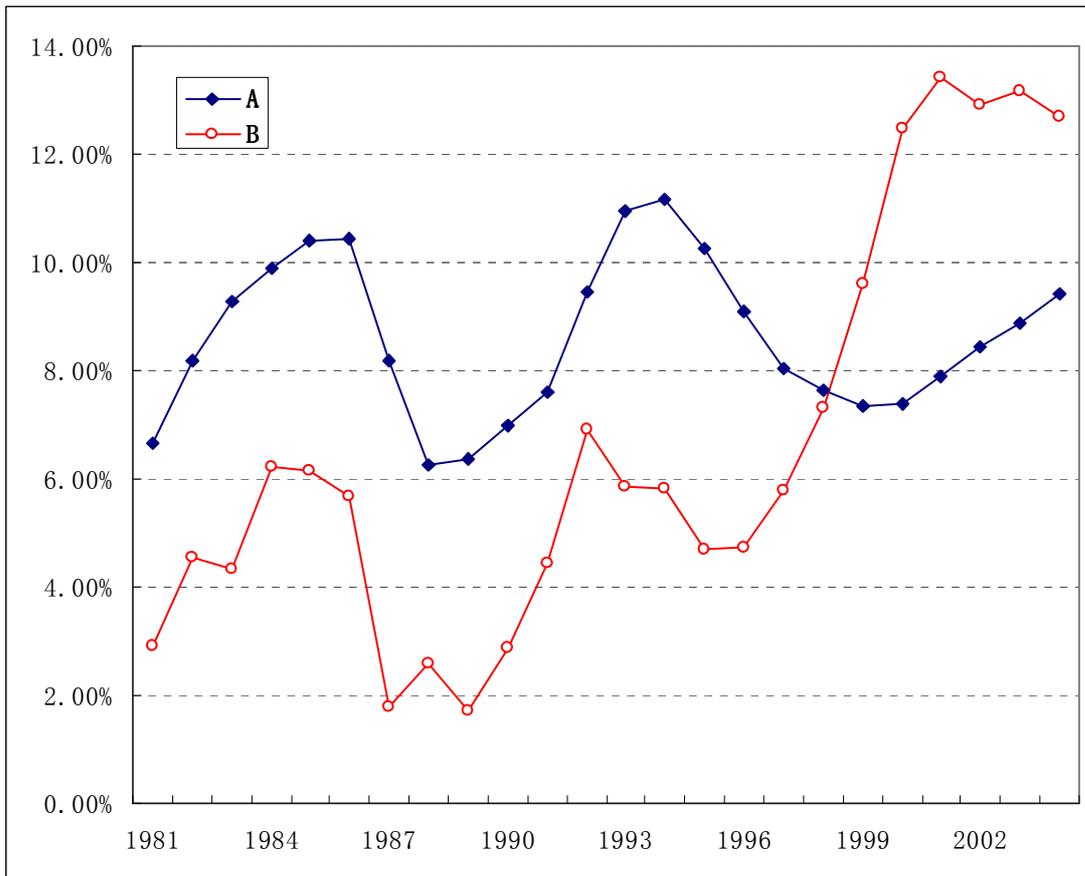
Source: Yong Ding, Y (2008)

Figure 15. Annual Growth Rate of Labor Force and Employment



Sources: National Bureau of Statistics, *China Statistical Yearbook 2006*; National Bureau of Statistics, *Statistical Communiqué of Labor and the Development of Social Security in 2006*, www.stats.gov.cn.
 Note: The statistical coverage of labor force and employment was revised in 1990. Hence, level data before and after 1990 are not comparable, although the comparability of growth data is unlikely to be significantly affected by the revision.

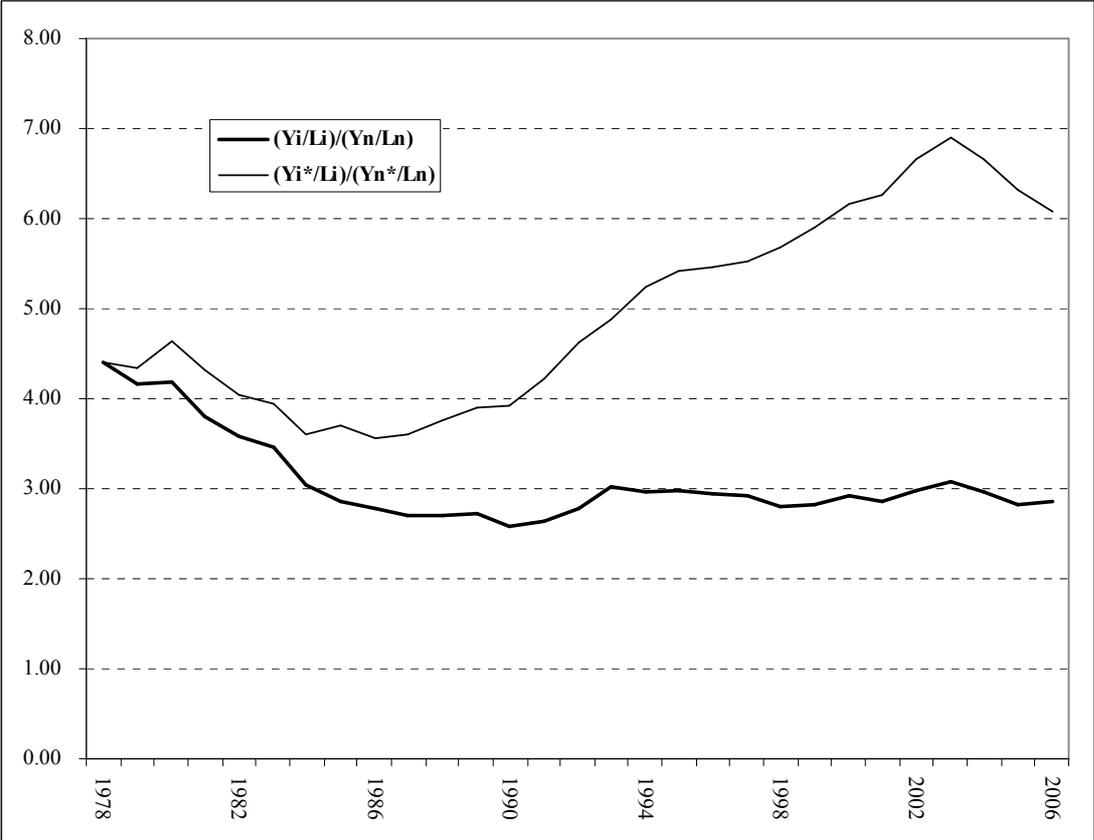
Figure 16. Annual Growth Rate of Per Capita Real GDP and Real Urban Wage Rate (5-Year Moving Average, %)



Sources: National Bureau of Statistics, *China Statistical Yearbook 2006*; National Bureau of Statistics, *China Statistical Abstract 2007*.

Note: A = per capita real GDP; B = urban real wage rate.

Figure 17. Relative Labor Productivity of Industry



Sources: National Bureau of Statistics, *China Statistical Yearbook 2006*; National Bureau of Statistics, *China Statistical Abstract 2007*.

Notes: Y = GDP and its components at current prices, with *denoting data at 1978 constant prices. L = total labor employment. The subscripts i and n denotes the secondary sector (i.e., industry plus construction) and the rest of the Chinese economy, respectively.