Session I

The 26th Pacific Economic Community Seminar

Examining the Mid- and Long-Term Structural Unemployment in Asia-Pacific

Behind Australia's Unemployment[1]

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1. Introduction

The recent Global Financial Crisis (GFC) has not only revealed fundamental governance issues of the fast-expanding financial sector, its impact has also been felt deeply in the real sectors and posed serious challenges to both analysts and policymakers. One of the most economically far-reaching and politically damaging consequences of the GFC has been unemployment. Most notably, as a barometer of the vibrancy of the economy, staggering unemployment figure in the US labour market has been interpreted as an indicator of sluggish recovery.

Recent labour statistics reports that no new jobs were created in the US in August 2011 and unemployment rates persisted at 9.1 per cent since April. Based on household survey data, the US Bureau of Labour reported that the number of unemployed persons was about 14.0 million, including 6.0 million long-term unemployed (those jobless for at least 27 weeks) accounting for about 43 per cent of all unemployed (Bureau of Labour Statistics, 2011). In addition to the fact that average unemployment duration reached a record high, all measures of underutilisation (such as discouraged workers, marginally attached workers and part-time workers for economic reasons) also peaked in 2009 and persisted at high level. For example, the August figures showed that 2.6 million were marginally attached to the labour force.[3]

The weak reading of labour market is associated with a slowdown of overall economic growth, which provided further ammunition for those advocating for policy easing. However, whether unemployment can be ameliorated through conventional monetary and fiscal policy is largely depending on the nature of the unemployment problem. The distinction between structural and cyclical unemployment has crucial implications for economic policy. If unemployment is mostly cyclical, monetary policy such as low interest rates and expansionary fiscal policy can boost demand and address the issue reasonably

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3 Among them, there were nearly 1 million discouraged workers who were, by definition, not part of the unemployment figure. They are the individuals who believe no jobs are available for them and therefore are not currently looking for work. Another 1.6 million people were also marginally attached to the labour force and had not searched for work in the four weeks preceding the survey (Bureau of Labour Statistics, 2011)

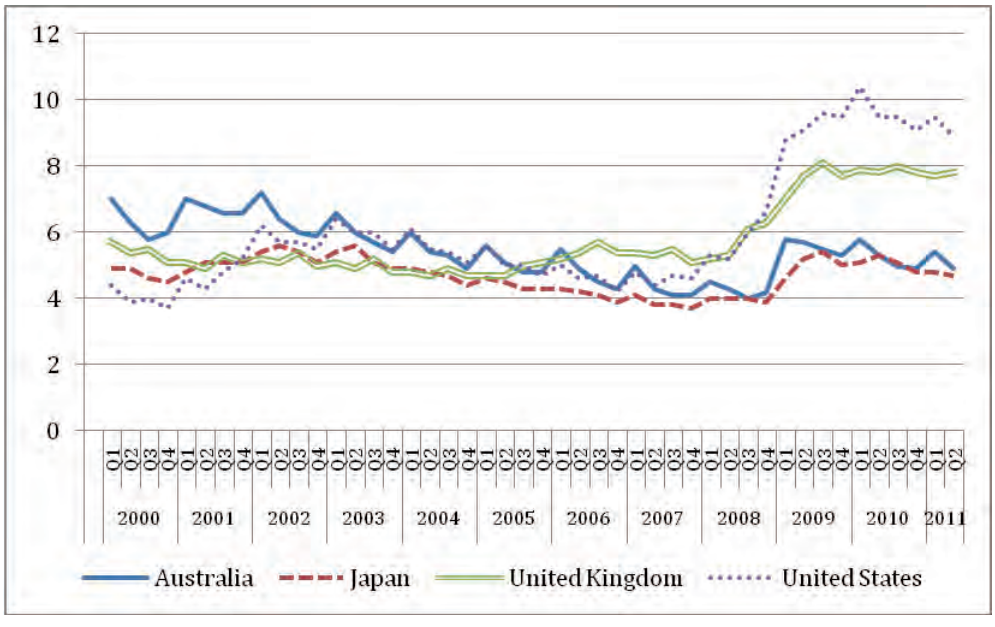
effectively without incurring upward pressure on inflation. However, if one observes a rightward shift in the Beveridge curve, meaning a higher unemployment rate for a given level of job vacancies, it is likely to suggest a decline in job matching efficiency. For example, jobless workers may not have the suitable skills required by the labour demand, or due to various reasons, jobseekers may not be able to move to where job vacancies are. As a result, the observed unemployment is probably more of a structural phenomenon and policies such as stimulus package aimed at cyclical factors would not be able to adequately address the structural unemployment. Given the importance of the unemployment issue and its implications for labour supply as well as potential output and growth, considerable discussion has focused on the nature of the current unemployment in the US and how to reduce the aggregate level of unemployment rate.

For OECD economies as a whole, the aggregate unemployment rate also has been a main source of worry. Since the onset of GFC, it has increased from a pre-crisis 18-year low to a post-war high of over 9 per cent. As far as the nature of the unemployment is concerned, Gianella et al. (2008) suggest that the structural unemployment rate for most OECD economies over the decade to 2007 has fallen substantially, while it has increased in the wake of the Great Recession. Moreover, the effects of hysteresis that are expected to be long lasting through long-term unemployment. As such, the shock of the GFC on aggregate labour demand can be transmitted to higher structural unemployment (Guichard and Rusticelli, 2010). To gauge the impact of GFC on unemployment, studies have also highlighted the cross-country differences in industrial structures and institutional settings. For example, for countries that have construction sector account for a high share of GDP, such as in Spain and Ireland, the collapse of this sector has resulted in a large number of job losses.

In stark contrast to US and most other OECD countries, the Australian economy has weathered the GFC, largely thank to the continuing growth and strong demand of China. As a large resources exporter, Australia has benefited from the robust growth and strong energy demand from China. Against the background of high global unemployment and weaker global demand during the GFC, Australian economy has successfully stayed afloat without going through contraction, achieving positive growth throughout 2009. In terms of labour market performance, Australian unemployment rates are among the lowest of OECD economies. In addition, inflation levels stayed under control remaining at the lower end of the target band and showed no signs of upward pressure. Given the distinctively different labour market dynamics in Australia, a specific discussion is warranted on both the overall situation and the factors underlying labour market in Australia.

The rest of the paper is organised as follows: the next section briefly summaries the various concepts that characterise unemployment and their relevance for the Australian labour market. Section 3 describes the trends and characteristics of unemployment in Australia, and section 4 looks into the Australian labour market and discusses the issues beneath the low unemployment rates at national level. The last section provides concluding remarks and summary discussion on policy implications.

Figure 1 Quarterly Unemployment Rates (%), Selected Economies 2000-2011



Source: OCED, Main Economic Indicators.

2. Measures for full employment

•NAIRU

Full employment, equilibrium unemployment or the natural rate of unemployment can be characterized in various ways. Analysts often provide definitions to serve specific research purpose. For example, Groenewold and Hagger (2003) define the natural rate of unemployment as that unemployment rate that would be observed if aggregate-demand shocks were absent, and the only shocks were from the supply side. A most commonly used measure is the non-accelerating inflation rate of unemployment, or NAIRU. It refers to the lowest unemployment rate increases with stable inflation, or in other words, the unemployment rate below which, inflation rate would be rising permanently. However, as NAIRU

is not directly observable, it needs to be estimated based on the relationship between inflation and unemployment, which is traditionally associated with the Phillips Curve. A number of methodological issues can emerge when estimating NAIRU and these issues have caused debate over the presence, accuracy and variability of NAIRU.

For NAIRU to exist, it implies that changes in the level of a stationary unemployment rates series are associated with that in the acceleration of price. In other words, price has to be an I(2) series and unemployment rates have to be I(0). However, existing estimations of NAIRU often do not test the order of integration of these variables. A related point is that Crosby and Olekalns (1998) suggest that uncovering a stable relationship between inflation and unemployment in Australia requires removal of trends in the series and a focus on the higher frequency movements in the data. NAIRU is found to be extremely difficult to measure with much precision (Motley 1990). It is likely to change over time through its interaction with both the government policies and economic conditions. Richardson et al. (2000) offers a general background and the details of estimating time-varying NAIRU within the Phillips curve framework. The time-varying NAIRU can be obtained via the estimation of a reduced form Phillips curve equation using a Kalman filter procedure. However, estimating and interpreting NAIRU remain to require considerable qualification.

In terms of estimates of NAIRU in relation to Australia, Kennedy et al (2008) estimate it was around 4.7 per cent in mid-2007; Lim et al (2009) estimate it was 5 per cent in 2008. In contrast, McDonald (2007) estimates a model with minimum and maximum unemployment rates and reports 2.5 per cent as the minimum equilibrium unemployment rate. He also shows that a range of equilibria between the minimum and maximum unemployment rates. Connolly (2008) fails to find consistent evidence of the presence of a NAIRU. He points out that many models that estimate NAIRU depend on the assumption or the empirical finding that the inflationary expectations coefficient is at least one. However, using methods that allow for accounting the serial correlation in the error terms and trending of unemployment rates, the inflationary expectation coefficient is most likely to be less than one. Connolly (2011) argues that many previous Australian estimates of this coefficient were based on misspecifications or estimated with econometric methods that led to upward bias.

• Structural and frictional unemployment

A closely related concept to NAIRU is structural unemployment. It refers to unemployment that reflects supply constraints in the economy. After adjusting for seasonal component and removing short-term trending, the overall unemployment can be mathematically decomposed into structural, frictional and cyclical components. Each of the components has different implications and hence requires specific policy responses.

One of the common methods to estimate the structural and frictional components is to equate them with the long-term trend plus a constant term (Connolly 2011). If the frictional unemployment equals the constant term, or long-term average unemployment rate, the difference between the structural and frictional rate and the long-term average would be the structural unemployment component. Meanwhile, the cyclical component is associated with fluctuations in aggregate demand related to swings in the business cycle, which can be calculated as the difference between the six-year trend and the one-year trend. However, this method has a number of obvious drawbacks. Firstly, it will generally leads to too high an estimate of the frictional unemployment rate. Secondly, it depends on the period over which the unemployment rate is being taken average. And thirdly, the estimates of both the structural unemployment and cyclical components are constrained to zero mean and therefore highly inflexible.

Alternatively, frictional unemployment can also be estimated by examining those who have been unemployment only for a short period of time, for example, up to four weeks. It is worth noting that this method would potentially include all unemployed workers such as those whose skills or geographic location do not match with employers' desires and hence should fall into the category of structural unemployment. In fact, due the information limitation that restricts the labour market data of the Australian Bureau of Statistics, it is difficult to avoid double-counting those who are structurally and frictionally unemployed.

• OSFUR

As a new measure, the observable structural and frictional unemployment rate, or OSFUR, has recently been proposed by Connolly (2011). The structurally unemployed component of this measure includes the so-called labour market outsiders, namely, those who were former workers but have not worked for two weeks or more in the last two years as well as those who have never worked before. For

frictional component, it includes the so-called labour market insiders, which excludes those who are structurally unemployed.

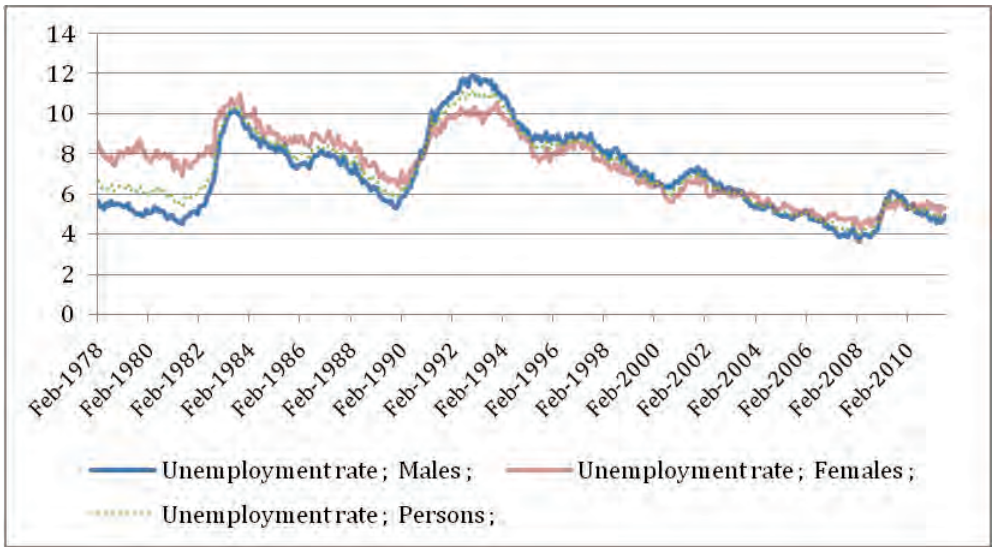
Compared with existing measures of equilibrium unemployment, such as NAIRU, OSFUR has two main desirable features. First, it can be calculated directly from detailed ABS Labour Force Survey data, in contrast to most existing measures that are unobservable as they are generated indirectly using the coefficients of econometric equations or similar methods. Second, the four components of OSFUR all have policy relevance. For example, the very long-term unemployed are likely to require retraining and wage subsidies to address. The rest labour market outsiders tend to need policies that remove barriers to labour force participation. For those who have never worked before, services that help to provide information and build experience would likely be needed. Lastly, services for facilitating job-search and information sharing can probably assist those who are in the frictional unemployment component.

As a caveat, because the time frame of structural unemployment is defined as a specific duration, in this case two years, and business cycle can span longer than this, the number of people included in the structural unemployment would inevitably account for some of the cyclically unemployed. However, as an alternative, OSFUR can serve as a very useful measure of the structural and frictional unemployment to characterise the capacity constraint in the labour market.

3. Employment in Australia: General patterns and characteristics

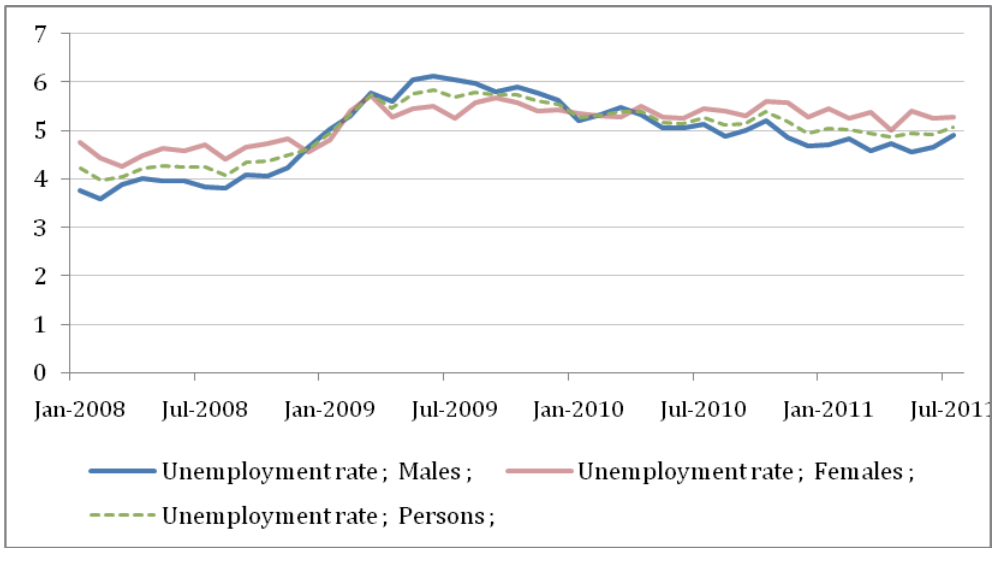
While the Australian economy faired well through the economic downturn, its labour market did experience a negative shock, particularly during 2009. About 200,000 jobs were lost in 2009 and unemployment rate increase significantly. In addition, there was a marked shift from full-time to part-time employment. Fortunately, labour demand was reasonably strong during the financial year of 2009, which eventually witnessed a net gain in employment. A general improvement in labour market is subsequently achieved. Unemployment rate started to recover since the turn of 2010. By late 2010, the unemployment rate come down to 5.0 per cent from 5.8 per cent in late 2009, and stayed below 5.4 per cent since February 2010. Figure 2 demonstrates that the annual overall unemployment rates of Australia have been generally low over the past decade. In particular, the annual unemployment rate has been kept below 6 per cent since 2003.

Figure 2a Unemployment Rates in Australia (%), male, female and persons, 1978-2011



Source: Australian Bureau of Statistics (ABS) Labour Force Survey seasonally adjusted data.

Figure 2b Unemployment Rates in Australia (%), male, female and persons, 2008-2011

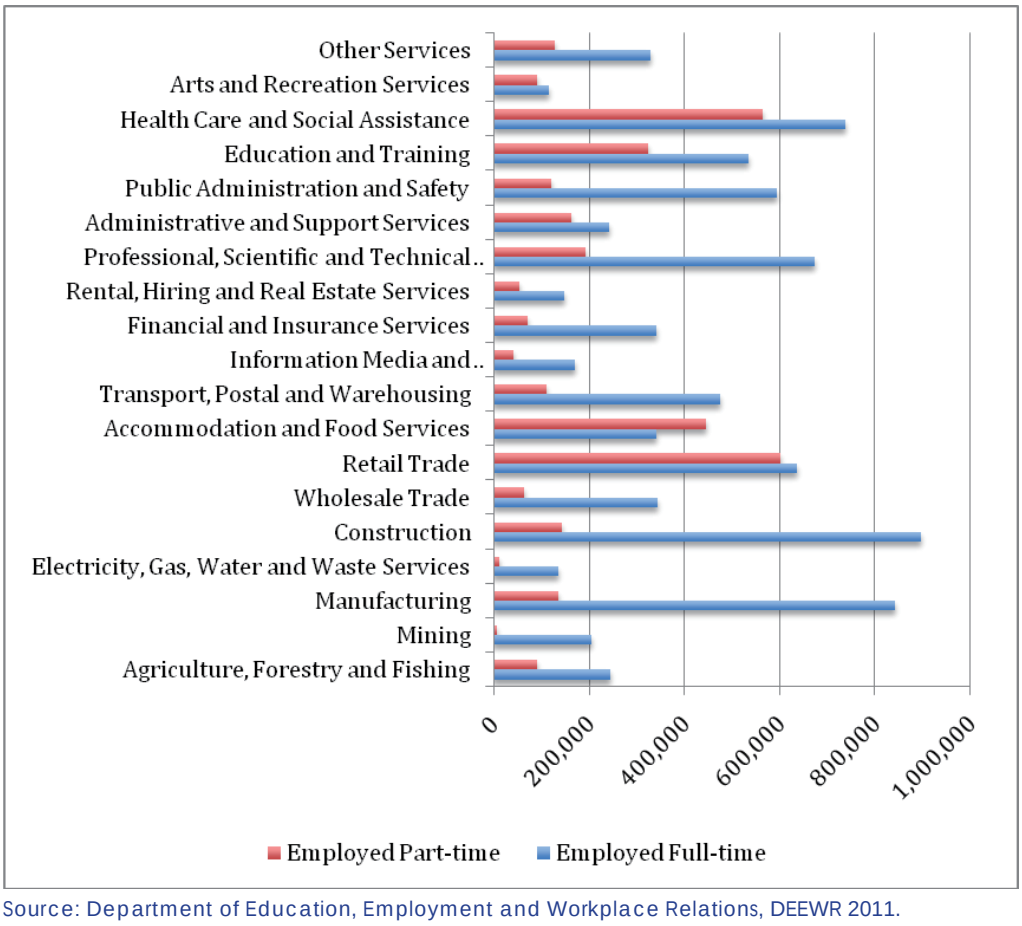


Source: Australian Bureau of Statistics (ABS) Labour Force Survey seasonally adjusted data.

In 2010, unemployment rate declined steadily resulting an overall unemployment just over 5 per cent. Looking into the unemployed, the absolute majority (82 per cent) of them had been unemployed for less than one year. The median duration of unemployment decreased from 16 weeks in July 2009 to 14 weeks in July 2010.

However, recovery of employment growth has been uneven across different sectors. To start with, there is a great variation in term of the shares of full-time and part-time employment across different industries. As Figure 3 shows that retailed trade typically has the highest share of part-time workers and mining has the smallest. Sectors that were hit hardest during the GFC, such as construction, have rebounded and became the main source of employment growth. Moreover, the change in the share of full-time and part-time workers also varies across industries. Notably, two large industries, manufacturing and construction saw the largest increase in the share of part-time workers in 2010 (Lim et al 2011).

Figure 3 Full-time and Part-time Employment by Sector, Australia 2011.



Source: Department of Education, Employment and Workplace Relations, DEEWR 2011.

In line with the relatively low overall unemployment figure and the favourable prospect of the economy, since late 2010, Australia has witnessed a renewed debate on the issue of full employment against the background that 5 per cent of unemployment rate can be considered full employment, or NAIRU, in Australia. If this is the case, the capacity of the government to further reduce unemployment is very limited. Or, it would run the risk of imposing upward pressure onto inflation and have a detrimental effect on the sustainability of economic growth. However, if the equilibrium unemployment rate for Australia is lower than 5 per cent and/or the aggregate unemployment figure does not provide a comprehensive basis for policy commitments, keeping unemployment at the current level would be very costly in both economic and social senses. The next section intends to throw some light on the complex labour market issues and discusses the factors that underpin the aggregate unemployment.

The case of Australia: The underlying picture

Depending on the measures used, the Australian labour market situation at the national level may present a full-employment picture or at least low unemployment rates. However, this aggregate unemployment figure may obscure a number of aspects that are of great importance. This section will focus on the following issues: (1) the variation of unemployment rates across regions and territories; (2) underemployment and hidden unemployment; and (3) the relevant policy implications.

• Regional variation

Underneath the 'full employment' picture at the national level, there exist regional variations that are sufficiently distinctive to warrant a discussion on the differences in terms of both unemployment behaviour and local government responses. Dixon et al. (2010) identify considerable differences in the time series properties of the unemployment rates across Australian states and territories. Dixon et al. (2001) conclude that regions have faced different long-run shocks and /or that the degree of economic integration between the states through wage and price flexibility, labour migration, capital flows, and so on has not been sufficient to generate convergence in the long-run paths of unemployment.

Plotting the standardised employment of individual states and territories 1978-2010,[4] Dixon and Shepherd (2011) find that the picture of individual state or territory seems visually similar. However, when they apply Johansen co-integration process to test for co-integration, the results rejected a single common employment trend. Figure 4 is reproduced with Figure 2 in Dixon and Shepherd (2011). To investigate further as to whether the regions follow similar short-run cyclical paths, Dixon and Shepherd (2011) find that larger states (including New South Wales (NSW), Victoria (VIC), Queensland (QLD), South Australia (SA) and Western Australia (WA)) tend to share similar cyclical features while smaller state and territories, (i.e. Tasmania (TAS), Northern Territory (NT) and the Australian Capital Territory (ACT)) exhibit no significant correlation within the group. There is also no significant correlation between those smaller states and the larger ones.

A related question is whether movements in states and territories experience region-specific shocks or common shocks that affect the entire economy. And whether there are common trends or common cycles in the state and territory unemployment rates. Dixon et al. (2010) analyse the Beveridge Curves of states and territories and identify a common 'national' factors and regional-specific factors in the determination of labour market activities. They show that equilibrium unemployment rates vary by region and over time and that there are marked differences in the size and behaviour of the gap between the equilibrium and actual rates of unemployment across states and territories.

The contribution of common shocks varies between 18 to 68 per cent. In other words, region-specific shocks account for between 32 and 82 per cent of fluctuations in regional unemployment rates. More specifically, looking at the period 1978-2000, Shepherd and Dixon (2002) estimate that about half of the variation in unemployment changes in NSW and VIC were associated with national forces, to a smaller extent for QLD, SA and WA, and essentially independent behaviour of TAS.

The regional variation in the trends and levels of unemployment rates, to some extent, reflects the different sectoral composition of the regional economies and local policies. Highlighting these differences calls for more detailed analysis to address region-specific issues and device policies that are suitable for each locality.

4 Standardization involves indexing each time series so that it has a mean of zero and a standard deviation of unity. This is achieved by subtracting the value of the mean of the original series from each observation and dividing the result by the standard deviation (of the original series)

•Underemployment and hidden unemployment

It is generally agreed that the commonly applied definition of unemployment is relatively stringent and narrow. The criteria for defining an unemployed person include the following three: (1) the person must be without work; (2) the person must be looking for work; and (3) the person must be available to start work.[5] While unemployment as a notion has been used as a critical indicator that characterizes overall labour market and macroeconomic situation, it is inadequate in capturing the complexities of labour market dynamics. Increase in casualization, rise in part-time employment, and the existence of marginal labour market attachment all require a more nuanced discussion that goes beyond the dichotomy of employment and unemployment. This sub-section discusses underemployment and hidden unemployment as two main areas of underutilization of labour.

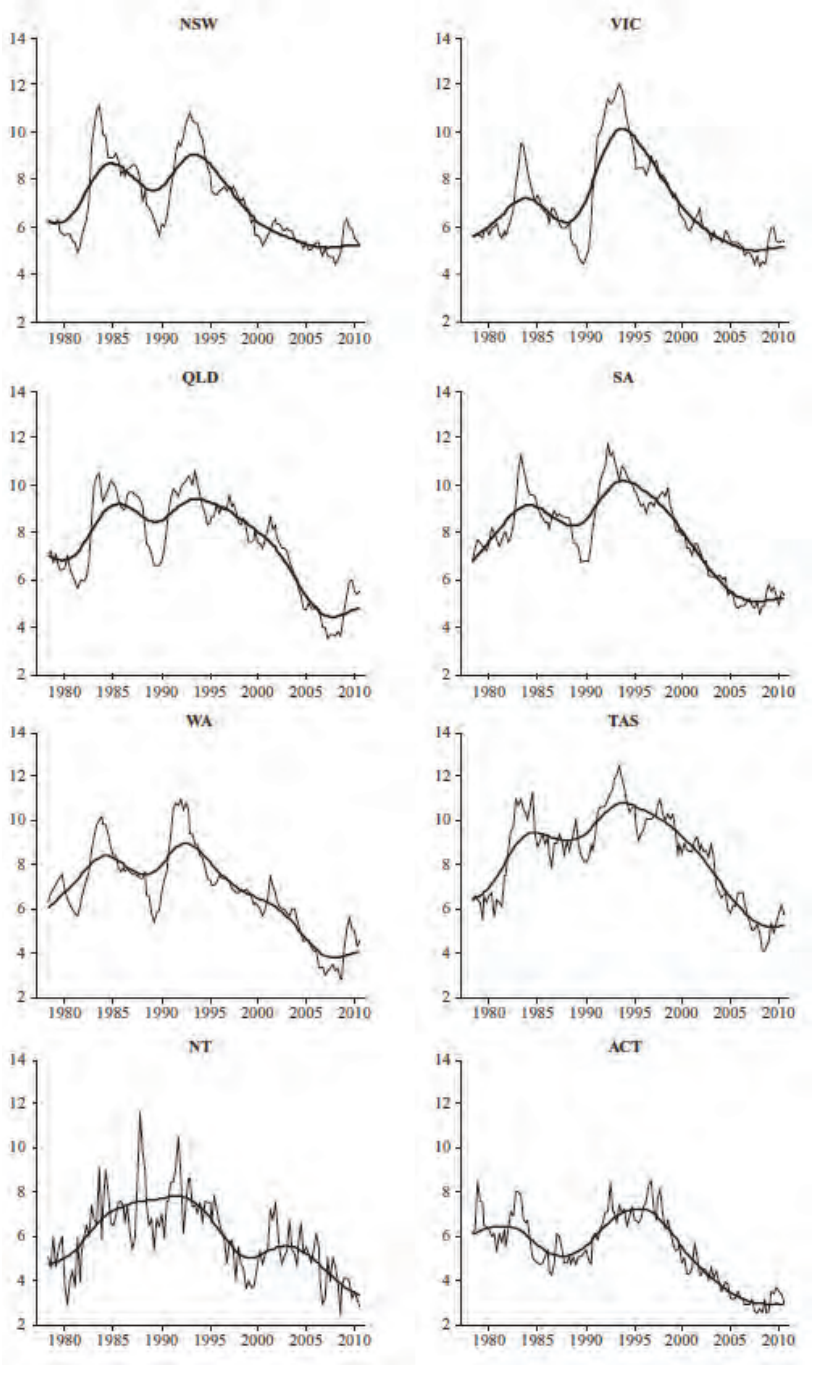
The Australian Bureau of Statistics (ABS) defines underemployed workers as part-time workers who want, and are available for more hours of work than they currently have, and full-time workers who worked part-time hours, during the reference week for economic reasons (such as being stood down or insufficient work being available). These workers while excluded from unemployment constitute a large and very important contributor to the underutilization of labour force. In addition there are those who are marginally attached to the labour force, sometimes called hidden unemployment. These include persons who either want to work but are not actively looking for work, and are available to start work within 4 weeks or want to work, are actively looking for work but are not available to start work in the reference week. It is worth noting these two broader measures of underutilization of labour involve a degree of subjective assessment and different degrees of likelihood of joining the labour force. Nevertheless, the following statistics demonstrates clearly that focusing on the official rate of unemployment alone will neglect a large battery of underutilised labour and obscure a number of important labour market issues.

The most recent information release of the ABS in August 2011 reports that there was a modest shift from full-time employment to part-time employment. The number of underemployed persons increased by 18,400 (3.0%) to 636,800. The number of persons looking for full-time work increased 24,500 to 458,900 and the number of persons looking for part-time work decreased 6,100 to 177,900. The total number of underutilized labour force was 843,500 persons. Using seasonally adjusted estimates, labour underutilisation rate increased slightly to 12.3 per cent. The male labour force underutilisation rate

5 See ABS (2001) for detailed description of measures of underutilised labour.

increased 0.3 percentage point to 10.5 per cent and the female labour underutilisation rate decreased 0.1 percentage point to 14.5 per cent. Figure 5 demonstrates that while the aggregate official unemployment rates have been kept low in Australia, the underutilisation rate of labour force is more or less persistent (except the sudden surge during the late months of 2008).

Figure 4 Unemployment rates and trends of states and territories in Australia, 1978-2010.



Source: Figure 2 of Dixon and Shepherd (2011)

Figure 5 Labour Force underutilisation rate by gender, Australia 2000-2011

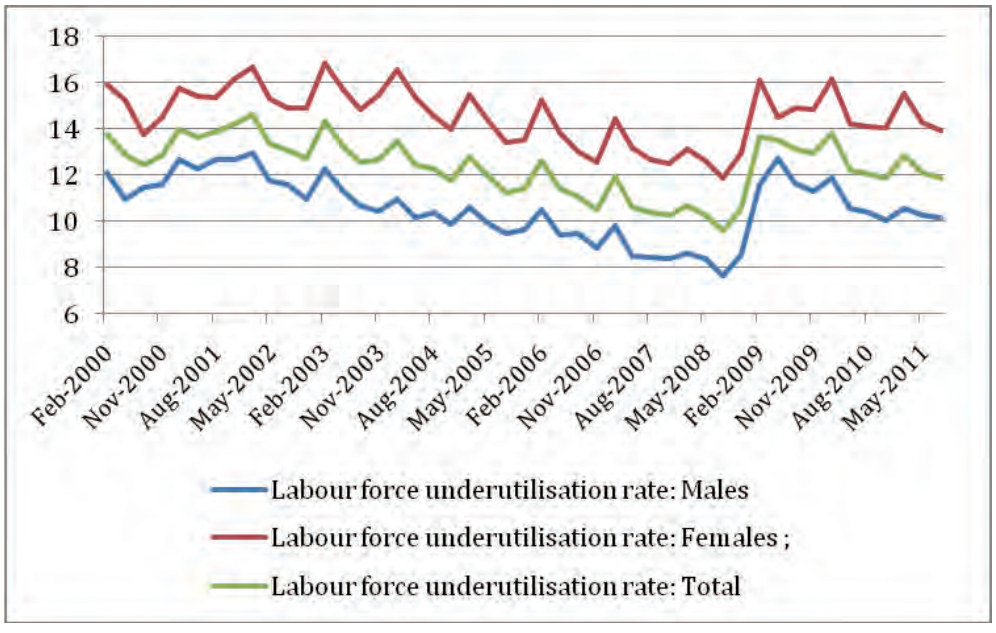


Figure 5 Labour Force underutilisation rate by gender, Australia 2000-2011

Examining underemployment and labour force underutilisation with respect to age cohorts, reveals that the youth group (aged between 15-24) has the highest underemployment share and labour force underemployment rate among all age cohorts. For example, the August 2011 data show that the youth group has the share of underemployment of 13.3 per cent and labour force underutilisation rate of 23.4 per cent. As shown in Figure 6, in terms of both indicators, the reading of the youth group is more than twice as high as other groups. To effectively address the underemployment and underutilisation of youth labour force need well targeted policies such as those aim at improving youth employment through increasing job-search efficiency, providing training to jobseekers and offering incentives for potential employers.

Figure 6 Underemployment and Underutilisation rates by age groups, Australia 2011, %

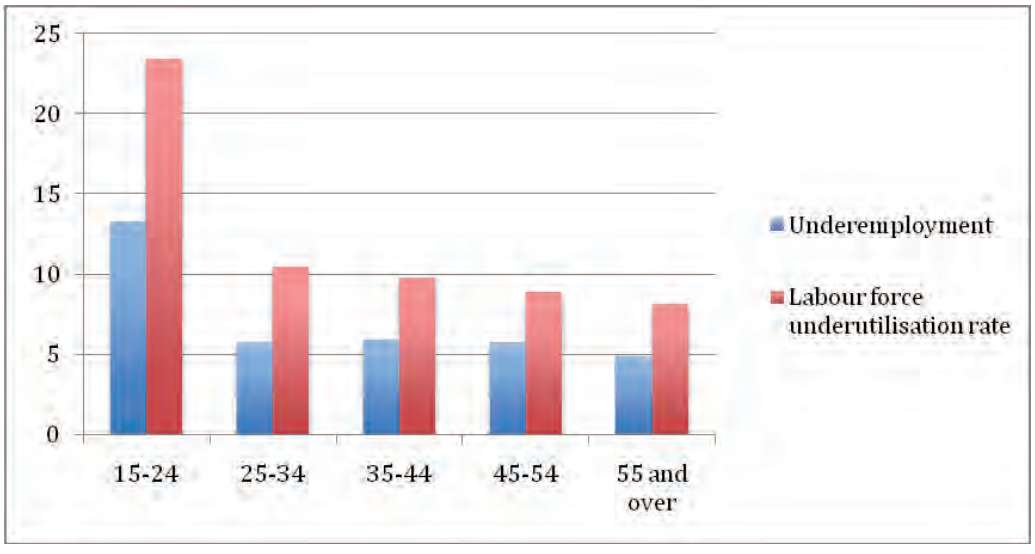


Figure 5 Labour Force underutilisation rate by gender, Australia 2000-2011

Hidden unemployment in general refers to those who are marginally attached to the labour force including discouraged jobseekers. Because this group of people do not actively search for jobs, by definition, they are not reported as part of the official unemployment. Similar to the case of underemployment, discouraged workers and other forms of marginal attachment to the labour force are often related to loss of productive capacity in the labour market, the loss of national income and raises issues of social exclusion for the individuals (Mitchell and Muysken 2008).

The development of hidden unemployment often originates from unemployment over an extended period of time. Therefore, a particularly relevant question is to what extent there is the issue of disengagement and how it is relevant to hidden unemployment in Australia. More specifically, some sections of population may become unemployed and remain unemployed for an extended period of time and/or eventually give up intentions of employment.

Existing studies have used longitudinal data to investigate the dynamics of different labour force status and how various individual and household characteristics as well as external conditions, such as policies, shape such dynamics. For example, employing the Household Income and Labour Dynamics Australia (HILDA) survey, Carroll (2006) studies the factors that may affect duration of unemployment. The results of this study suggest that variables that increase wage offers and lower reservations wages are associated with shorter unemployment duration, and that exit rates from unemployment appear to remain

steady initially with duration before declining relatively sharply. Elliott and Dockery (2006) investigate the gender difference of the transition from hidden unemployment to employment. They find that this transition is significantly for men than for women. Somewhat consistently, Wooden (1996) and Gray (2004) find that compared to men, women face generally higher labour force discouragement. This is true especially for women with children under 15 years of age, and for unmarried people than for married.

Long-term unemployment is associated with important economic and social costs. According to Connolly (2011), the share of very long-term unemployed in the OSFUR has fallen from 24 per cent in May to around 12 percent from mid-2007 to mid-2009, but since then has risen to 16 per cent in May 2011.[6] In terms of policies, in addition to uncovering the determination and characteristics of individuals who fall into the hidden unemployment category, the close association between long-term unemployment and hidden unemployment has attracted increasing interest. From a macroeconomics perspective, long-term unemployment plays a key role in hysteresis effects, as suggested notably by Ball (2009). Workers who have been unemployed for some time tend to become less attractive to employers. Not only human capital of the unemployed diminishes over time, but also as a result of recruitment costs, potential employees are frequently evaluated on the basis of frequency and duration of their periods of unemployment (Lockwood, 1991). Job search may also diminish as the unemployed lose contact with the labour market and awareness of job offers.

Using a simple dynamic regression model, Guichard and Rusticelli (2010) estimate the sensitivity of long-term unemployment to aggregate unemployment. Their aim is to explain long-term unemployment (defined as the number of workers who have been unemployed for more than 12 months) in terms of aggregate unemployment. Their results for Australia show that 1 percentage increase of the aggregate unemployment is estimated to result in a 0.51 percentage point increase in the long-term unemployment rate. As this long-term effect is much higher than the actual share of long-term unemployment (of around 16 per cent), and incidence of long-term unemployment is expected to rise with unemployment. The share of very long-term unemployed in the OSFUR has fallen from 24 per cent to around 12 percent from mid-2007 to mid-2009, but since then has risen to 16 per cent in May 2011. Based on the OECD study, most of the long-term impact of a sustained unit increase in unemployment on long-term unemployment takes place over a three-to-four-year period.

6 The notion of very-long term unemployment is defined as those who have been unemployed for two years or longer.

• Policy implications

Based on the preceding discussion on the regional variation of unemployment rates, it would be useful to further investigate the suitable policy responses to Australia's labour market issues. Groenewold and Hagger (2003) find the relationship between the 'natural' and actual rates of unemployment varies widely across Australian states over the period 1979-2000. They therefore caution on the effectiveness of nation-wide policies and stress the importance of state-specific anti-unemployment policy measures that are better positioned to address regional idiosyncrasies. In addition, some studies find a negative correlation between the average unemployment rate and the variance in state and territory unemployment rates (for example, Stubbin and Hart 1991, Dixon et al. 2001). This seems to imply that national counter-cyclical economic policy should be developed and implemented with its effect on the dispersion of state unemployment rates taken into account.

To address the regional difference in unemployment, some localities may be identified to require 'special treatment'. For example, across Australia's states and territories, Tasmania seems to have had relatively high unemployment rates persistently. Consequently, some would go so far to argue that Tasmania is in this position primarily because it has a much higher natural rate than the rest. Dealing with Australia's unemployment rate disparity is, therefore, primarily a matter of tackling Tasmania's natural rate (Groenewold and Hagger, 2003).

Another question that is related to addressing the regional differences would be to what extent regional differences in unemployment rates are due to variation in industrial structures. For example, the larger states such as QLD, NSW and VIC have greater share of manufacturing and service compared to the smaller states. Decomposing the differences in regional employment growth into an industry growth difference and a difference in the structure of industry. Evidence emerged from recent studies (for example, Belke and Heine 2006, Dixon et al. 2010) suggests a rather limited role for a region's industry structure in explaining its employment growth. For instance, estimating the Beveridge Curves for the states and territories over the period 1983-2008, Dixon et al find that industry structure alone accounted for only a little over one-third of the differences in cross-correlations of the cycles.

While Australia's overall unemployment rate is only around 5 per cent, the possibility of rising structural unemployment still deserves policy response. In particular, the issues of skill mismatch have led

to specific policy debate on skill migration. While the advocates argue that giving the tightening labour market conditions, the most effective policy option would be to address the observed skill shortage through skill migration programs. This is intended to address the skill shortage that does not seem to be able to be resolved within the domestic labour market. In contrast, some have argued boosting skilled migration as a simplistic solution and advocate a focus on well targeted policies aiming at developing skills of those who are unemployed/ discouraged due to skill mismatch. A comprehensive evaluation of the skilled migration debate and, to some extent, the controversial population policy debate is beyond the scope of this paper. However, it is clear that unemployment issues in Australia involve a whole range of policy responses, which requires labour market policies to be put in the context of the development of Australia's economy and society as a whole.

Conclusion and Summary

This paper has first contrasted the major unemployment problem in the US and some other OECD countries with the tightening labour market conditions in Australia. It then identified that the focus of the unemployment problem or labour market issues in Australia is on the seemingly "full employment" situation and its policy implications. A number of relevant measures of the equilibrium unemployment are reviewed and their respective estimating issues are discussed. As part of the discussion, it highlighted a newly introduced alternative measure of structural and frictional unemployment.

To understand the nature and implication of unemployment in Australia, this paper first briefly summarizes the pattern of unemployment in Australia since the GFC before goes on to investigate a number of important factors underlying the aggregate unemployment figure. The investigation stresses the regional variation and its policy implication as well as to the extent people who experienced long-term unemployment may become disengaged or marginally attached to labour market which in turn ultimately exit out of labour force.

As the Australian economy is expected to prosper and continue to benefit from favourable terms of trade and resources export, Australia's labour market conditions will likely be further tightening and unemployment rate may continue to decline. Increasingly, understanding unemployment in Australia would require discussions that put unemployment into a more nuanced perspective and link employment issues with a range of major policy debate pertaining to productivity, growth, inflation and immigration.

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China's Labor Market: Then, Now and Future*

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[Abstract]

This paper first reviews the evolution of China's labor market after the urban economic reform since 1984. Then it discusses the five major issues in China's current labor market: Rural Migration Workers and the Lewis Turning Point, International Trade and Labor Market, Employment in SOEs versus in Private and Multinational Firms, Enlarging Wage Inequality, and Labor Institutions and Wage Costs. To address the policy implications of the five interrelated issues, I propose policy suggestions and critiques according to three sources of these five issues: regional discrimination, central-local government incentive incompatibility, and lack of marketization and institutionalization.

[Key Words]

Unemployment, Demographic Dividend, Lewis Turning Point, Labor Institutions, Inequality.

[JEL Code] J0, J4

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1. Introduction: China's labor market after 1984

Although China's economic reform started to experiment in some villages in 1978, it is usually deemed to be officially carried out in 1984 when the reform extended to cities and China's "open-door" policy was announced. The 1984 economic reform has profound impacts on China's development. Since then, China has been in the transition channel to "market economy" from "central planned economy".

As the most populated country, the change in China's labor market is certainly one of the most important issues in the great transition. Before 1984, unemployment was not even an issue in China for the following two reasons: first, state owned enterprises (SOEs) and collective owned enterprises (COEs), which were dominant in China's economy, were obligated to absorb most of the urban labors;[1] second, due to the rigid household registration system (Hukou), rural labors were constrained to the land where they were born and thus can not join the urban labor force for higher returns. The Hukou system results in dual labor market in China: though rural workers were underemployed and earned lower labor returns due to lower agricultural productivity, they can not access the urban labor market.

It is widely believed that a very important (arguably the most important) source of China's magnificent economic growth is the institutional reform in the labor market. The relaxation of rural-urban migration and the rights of flexible employment in profit-maximizing public firms (i.e. SOEs and COEs) greatly mitigate the resource misallocation problem and make China enjoy the so called "demographic dividend" since 1984. The most recent wave of globalization since mid-1980s which was coincided with China's economic reform has enlarged such demographic dividend: on the one hand, cheap labor with modern urban infrastructure helps Chinese goods easily gain and maintain competitive advantages in most of the labor intensive products in the world market; on the other hand, more offshoring activities (including FDI and outsourcing) have been attracted to China for much cheaper costs in labor intensive production procedures.

However, the transition of China's labor market is never a smooth process. China is headache for two problems: unemployment and income inequality. The unemployment problem mainly stems from three sources: first, the shift of labor demand from traditional industries to modern ones caused structural unemployment; second, to make public firms survive, China's government allows them to lay off

1 Those with criminal records were, however, hard to find a job in those firms. Some of them were thus forced (but also allowed) to start their personal business and eventually became the earliest private economy in China.

employees which results in millions of formerly underemployed labors becoming explicitly unemployed;[2] third, millions of rural workers to urban areas are quite vulnerable in facing labor demand shocks and thus easily become unemployed though the majority of them are still not shown in China's unemployment statistics.[3] Income inequality is a global phenomenon but it is particularly severe in China because China has not yet established a sound social security programs and other related systems to help the poor. Except for the commonly observed inequality due to gender and difference in skill, the inequality is also found between urban workers and rural migration ones since the latter usually do not have Hukou and thus are seriously discriminated in urban markets. Furthermore, regional segmentation exaggerates the regional income inequality as well. Both unemployment and income inequality emerge to be one of China's biggest concerns since both of them may cause social instability which is certainly the last thing that the China's government would like to see.

Before 1984, health care and retirement pension fully covered most of the urban employees. Unemployment benefit and housing accumulation funds were not introduced until late 1990s. However, unlike the social security program (SSP), at the early reform stage these benefits were not provided by government. They were instead provided mostly by SOEs and COEs themselves. To shake off the social burdens on public firms, China's government has opted to take over the SSP itself since mid-1990s. But the problem is, due to lack of sufficient funds, the social security program were still city-based which can not be extended to rural areas with only few exceptions. Furthermore, Hukou once again was used as the identifier for claiming SSP. That is, rural migration workers, who usually do not possess Hukou, were mostly excluded from the SSP until most recently. In the transition to modern labor market, China's government also established many labor institutions. For example, China passed the first labor law in 1994 and the Minimum Wage Regulation ten years later.

To have an insight into China's labor market, the rest of the paper investigates the five major issues in labor market and discuss the policy implications as follows. Section 2.1 addresses the well-known rural-urban migration since 1984. Section 2.2 links employment to international trade. In particular, it discusses the role of processing trade. Section 2.3 analyzes employment situations under difference ownership structure (i.e. SOE vs. private and foreign owned firms). Section 2.4 discusses the problem of income inequality. Section 2.5 reviews and comments on the evolution of China's labor institutions such as

2 China launched its “re-employment project” in 1996 in Shanghai, which is soon applied throughout the nation.

3 Since rural workers in cities in general do not possess Hukou, they are therefore not counted as registered labor and not included in unemployment statistics.

minimum wage requirement and social security program. Section 3 concludes with policy discussions for the future of China's labor market.

2. The Five Issues in China's Labor Market

2.1 Rural Migration Workers and the Lewis Turning Point

It is almost a routine to first address the rural migration workers' problem when studying China's labor market. In the last two decades, thanks to the continuous and almost unlimited labor supply from the rural area, China became a most competitive world manufacturer, especially in labor intensive products (also including labor intensive intermediate inputs). According to Cai (2010b), the number of rural workers[4] were about 225 million in 2009. And about 63% of the workers chose to work in other places than their hometown. The fraction of rural migration workers is still increasing. Enjoying the huge benefit, which is often referred to as "demographic dividend", China's economy has experienced steadily fast growth and emerged to be the second largest economy in the world in 2010.

However, how long can China still count on the "demographic dividend"? In other words, will China reach the well-known "Lewis Turning Point" (Lewis, 1958) soon? The answer is a matter of debate. Some economists argue that China has already passed the Lewis Turing Point. The evidences are, for example, that many cities have reported labor shortage recently and the fast increase in wages for rural workers. According to First Financial Daily, Zhejiang Province and Guangdong Province, as two largest rural worker recipient regions, started to report their labor shortage of 50 and 100 million respectively in 2004. Cai (2010a, b) asserts that China have already passed the Lewis Turning Point since 2003-2004. Except for the labor shortage evidence, Cai (2010b) further provides the evidence of increasing wage for rural migration workers. According to the China Rural Household Annual Survey, nominal wages for rural workers increased by almost 50% during 2003 to 2008, or almost 30% in real terms. However, others argue that China has not approached to the turning point yet. (See, for example, Minami and Ma, 2009) Hai (2010) points out the fact that there are still 50% of the Chinese population living in rural area whose total income (measured by value-added in agriculture sector) only accounts for 10% of the China's GDP. In other words, there is still a big pool of rural labor who could be potential migration workers to urban area due to big income gap.

4 Rural workers are defined as the former farmers who work more than 6 months in nonagricultural sector.

The debate has very important policy implications to China's government: if China has already approached or passed the Lewis Turning Point, then it must be aware that the demographic dividend has vanished and it must opt to upgrade its industrial structure from (unskilled) labor intensive industries to capital (including human capital) intensive industries; Otherwise, if China still has a big pool of underemployed rural labor, then the policies should be aimed at removing or mitigating various barriers that hinder the mobility of rural-urban migration.

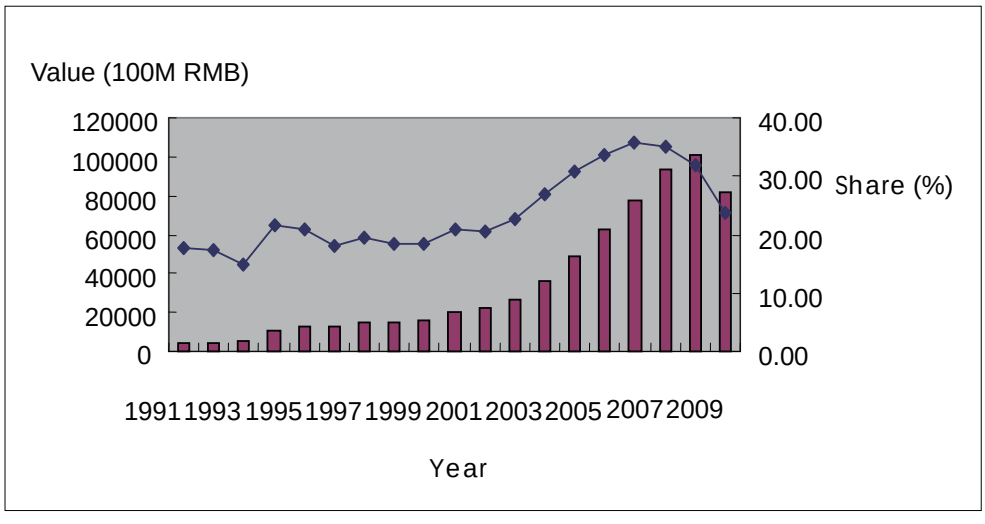
Given the data and evidences of both sides of the debate are valid, we may find the coexistence of both labor shortage in town and labor surplus in rural area! The coexistence could be explained by institutional barriers which prevent further labor mobility due to large income difference. However, this explanation may be weak since the institutional barriers, though still exist, have been substantially undermined overtime. For example, many cities passed minimum wage laws/regulations and allow rural workers to join their local social security program. From my point of view, the puzzle of coexistence mainly results from the following two reasons. First, the gap between rural income and the income of rural worker in town may not be that large since a significant part of the rural income is not monetized (for example, farmers in general do not need to pay rent for housing and most of the costs for food). Therefore, the rural income, in many events, is more like a net saving than gross income. On the contrary, though rural workers in town are paid much more, most of the income eventually has to be used to cover the necessary living costs such as housing rent, medical care etc. which are fast rising. Second, with the rapid infrastructure development, provinces in inner land China are also gradually attractive to firms in (unskilled) labor intensive production. To achieve economic growth target, those inner land regional governments have quite strong incentive to retain the rural workers nearby to attract more investment. For example, Foxconn, one of the largest processing partners with Apple, moved its factories from the Shenzheng (a coastal city near Hong Kong) to Zhengzhou (the capital city of Henan province in central China) in 2010. Foxconn's reallocation in Zhengzhou increased more than 100 thousand employment locally. Therefore, labor shortage may only be a regional phenomenon, rather than a national one.

Of course, China should not count on the benefit of "demographic dividend" for sustainable growth in the future. With the one-baby policy, China's total population is predicted to peak at 1.4 billion around 2020. The working age population will be decreasing even earlier. Thus, the Lewis Turning Point, at least from demographic point of view, is coming, if has not passed yet. So policies aiming at upgrading industry structure towards capital (including human capital) intensive production are certainly desired. The coastal regions, which have already experienced labor shortage, may be prepared for the industry upgrade first.

2.2 International Trade and Labor Market

It is widely believed that China's fast growth is mainly attributed to two engines: international trade and investment. Broadly speaking, international trade includes not only the mobility of final and intermediate goods as well as resources but also foreign direct investment (FDI).

Figure 1. Export Value and Share: 1991-2009



Source: National Statistical Yearbook (China): 1996~2010.

Figure 1 shows that not until the most recent global crisis, China's exports have increased rapidly. The (nominal) value increased by almost 30 times in 2008 compared to its 1991 level; the share of exports to GDP also nearly doubled during the same period. The fast growing export sector helps China absorb tens of million of workers. Since China's exports mainly have comparative advantage in labor-intensive products, their labor demand elasticity is in general greater than other sectors. Furthermore, development in communication and transportation technology with largely reduced trade barriers also helps China attract FDI and Outsourcing business. Once again the foreign business in China, such as processing trade (which accounts for almost two thirds of China's total international trade in 2008), is mainly in labor intensive industries. Based on the China Industry Survey Database,[5] Figure 2 shows that the exporting firms' employment increased to 35.7 million in 2007 from 22.1 million in 1998, or to 45% of the total manufacturing employment in 2007 from 39% in 1998. Similarly, multinational enterprises' (MNEs)

5 The database covers all the SOEs and other types of manufacturing firms that have capital stock above 5 million RMB.

employment increased from 13.2 million (16.7% of total manufacturing employment) in 2007 from 5.2 million (or 9.2%) in 1998. Literatures that use other data sources also support the positive relation between exports/FDI and employment in China. For instance, Karlsson et al. (2009) and Gong et al. (2006) find that foreign acquisition increases employment in China.

Figure 2. Employment Shares (%) in Manufacturing Production

Source: China Industry Survey 1998-2007.

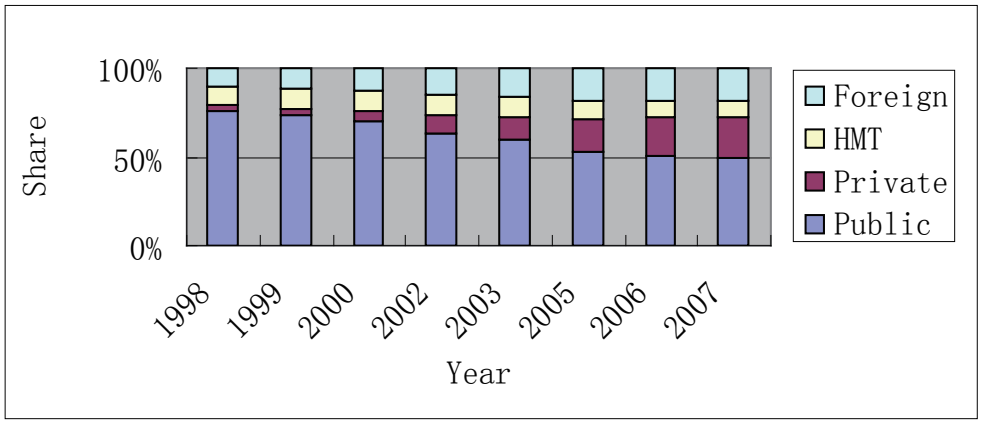
However, it receives less attention from scholars that the impact of FDI on labor market volatility (i.e. the second moment effect of FDI on labor market) is also one of the major concerns to policy makers. While a number of studies have underlined the effects of FDI activities on employment, no consensus has yet been reached in this regard (Baldwin, 1995). Some literature argue that FDI may reduce the employment volatility since MNEs typically have broader market (i.e. global market) to hedge idiosyncratic shocks and they have stable institutions that prevent them from imprudently laying off employees. However, others argue that MNEs may have several branches in different countries so that they can easily shift the labor demand to other countries' branches once they receive a labor supply shock (for example, an imposition of minimum wage law). In other words, FDI may increase employment volatility. Both arguments find empirical supports. However, from my point of view, both arguments are valid since they are based on different scenarios and MNEs are rather different due to the industry-specific heterogeneity. MNEs in some industries that are mainly specialized in processing due to cheap labor in China are more likely to fit the latter scenario and thus to increase employment volatility. MNEs in other

industries which mainly outsource their production procedures only to China or wish to access China's market would be more likely to reduce the employment volatility. Chen and Li (2011) explore the detailed firm level data in industry survey database (1998 to 2007) and confirm that FDI's role on employment volatility varies in different industries (at the most disaggregated 4 digits level): among 800 manufacturing industries, FDI in 204 of them are found increasing employment volatility and 65 of them are found reducing volatility (and FDI in the remaining industries do not exhibit a significant effect).

2.3. Employment in SOEs versus Private and Multinational Firms

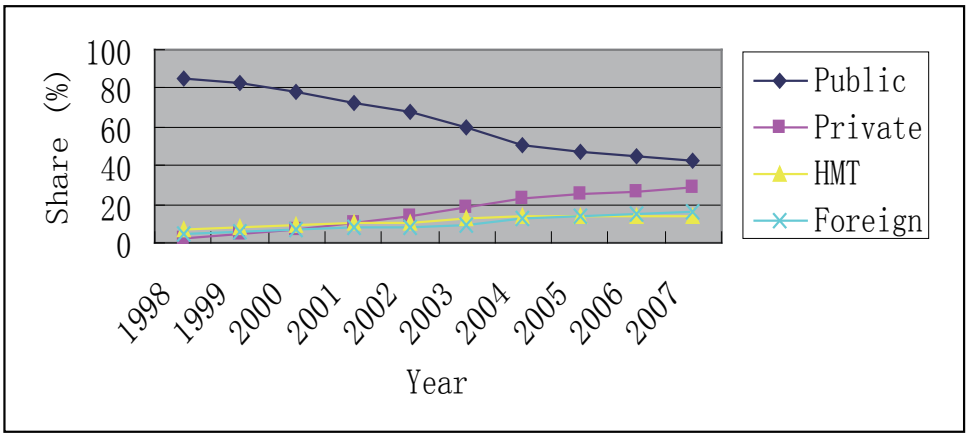
Before the urban economic reform in 1984, most of the urban employment was in SOEs (including COEs). Due to their public characteristics, SOEs' objective function does not only aim at profit-maximizing like other market oriented firms but also undertake many social security tasks such as helping government to meet the (urban) employment goal. Thus, employment in SOEs was quite rigid and could not be flexibly adjusted when facing shocks. As a result, SOEs were on average more labor-intensive compared to other firms in the same industries due to underemployment problem. Due to the increasingly fierce competition from non-SOEs, such as private firms and MNEs, the employment objective imposed on SOEs was gradually weakened. China started to allow lay-off in SOEs since mid-1990s and further to allow low efficient SOEs to exit market (i.e. allow them to bankrupt). The reform in SOEs resulted in a wave of failing low efficient SOEs, especially those in the labor-intensive industries. Thus, SOEs have become less important in China's economy not only in terms of its value-added (as shown in Figure 3a) but also its employment share (as shown in Figure 3b) since late 1990s.

Figure 3a Value-added Share of Different Types of Manufacturing Firms



Source: China Industry Survey 1998-2007 (data are missing in 2001 and 2004).

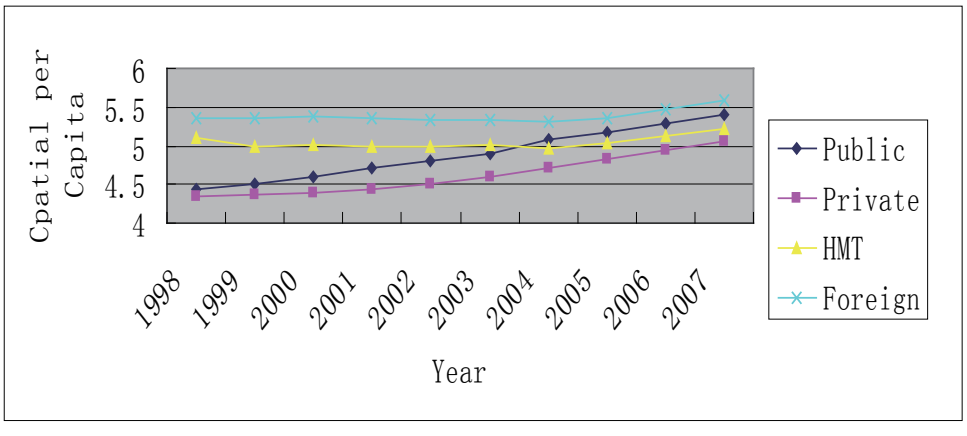
Figure 3b. Employment Share of Different Types of Manufacturing firms



Source: China Industry Survey 1998-2007.

However, the reform also allowed China to focus its public investment on the SOEs of some "key" sectors which are mainly capital-intensive and usually have monopolistic structure. For instance, to maintain national security and sustainable development, China strategically invests on and upgrades the relevant industry sectors in resource/energy (such as SGCC, SINOPEC, etc.), communication (such as China Telecom, China Mobile, etc.), transportation/machinery (such as CSR, CNR, etc.), and the military industry. Thus an interesting phenomenon has arisen recently: public firms in manufacturing have regained its economic power yet they have become more capital intensive not only by comparing with their past but with other types manufacturing firms (as shown in Figure 4).

Figure 4. Capital Intensity under Different Ownership



Source: China Industry Survey 1998-2007.

Private firms, on the other hand, mainly focus on labor-intensive production for two reasons. First, unlike SOEs, private firms usually find it difficult to obtain loans from banks (most of which are also SOEs). So it is a natural choice that private firms usually choose labor intensive production since it requires less dependence on investment and capital stock. Besides the tighter financial constraint, private firms also differ from the SOEs for their flexible employment. They are more easily to recruit or lay off workers due to low adjustment cost (i.e. lay-off is relatively costless). Figure 3a and 3b show that private firms, though still employ less than SOEs, have emerged to be an important source (if not the most important) of absorbing residual labors released from SOEs and rural workers.

Similar to the private firms, MNEs are another important source for China's employment growth. MNEs are typically the most productive firms in their corresponding industries. Though the MNEs' branches in China also exhibit capital-intensive production pattern, however, is indeed labor intensive relative to their parent firms. As mentioned in section 2.2, processing trade, which accounts for almost two thirds of China's total international trade, is mainly labor intensive. From Nike, L.V. to Apple, Boeing, we find all kinds of MNEs, no matter which industries they belong to, tend to outsource their labor intensive production procedures to China for cheaper labor cost. It is clearer if we just look at the MNEs from Hongkong, Macau, and Taiwan (HMT firms) in Figure 3. Since the majority of those HMT firms engages in processing trade, they are even more labor intensive than the public firms. It is also worth noting that a considerable fraction of MNEs' employment is rural workers. It is reported that the total employment of Foxconn in mainland China has exceeded 1 million, and the majority of them are from rural areas. (Sun, 2010)

2.4 Enlarging Income/Wage Inequality

Income/Wage inequality [6] is indeed a global problem in labor market and a core topic in labor economics. After the great economic reform in 1984, the marketization of labor market leads to not only higher (real) income/wage thanks to more efficient labor allocation but wider inequality. The GINI coefficient reported by the China's National Bureau of Statistics (NBS) was 0.34 in 1990 but exceeded

6 Wage and Income inequality is conceptually different since besides wage, capital gain and other benefits also contribute to income. Considering that China is has limited investment choices (international investment is not feasible due to control on capital flow), wage can, to a large extent, represent income. Thus I wage and income inequality is exchangeable in this paper.

0.47 in 2008 according to the World Bank. The wage disparity trend was modest until mid-1990s when China started to allow lay-off in SOEs. After 1996, the disparity trend, though zigzag, was significantly accelerated. (See, Lu and Jiang, 2008) To further investigate the sources of the inequality, I study the income inequality from the following three dimensions: gender, education, and market segmentation.

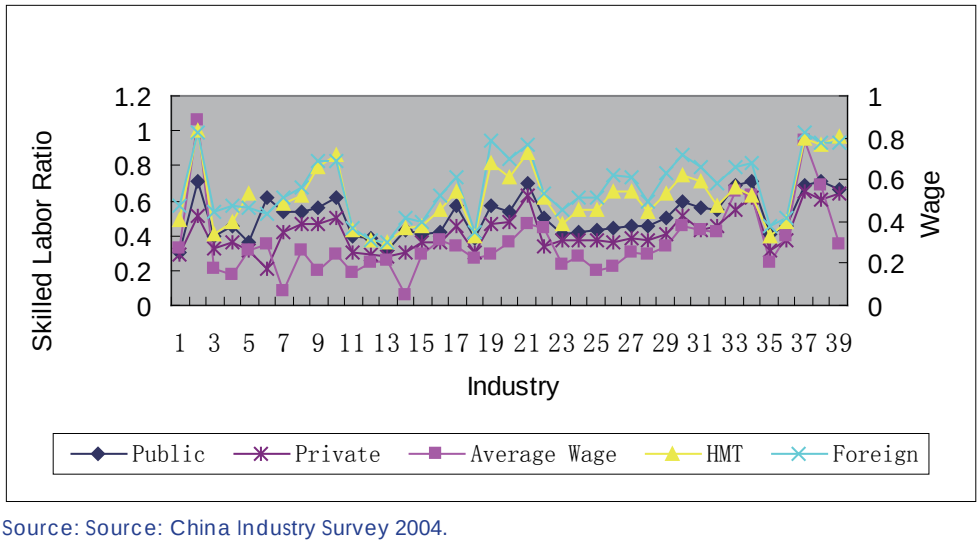
Gender discrimination is a global phenomenon but it has been exaggerated in China especially since China's reform in SOEs in mid-1990s. On the one hand, SOEs were more likely to lay off senior female workers since they are in general the cohort with lowest productivity; on the other hand, firms (especially the private ones) are reluctant to employ young women who have not had a baby yet since it is otherwise a big burden for firms to pay the costs for possible maternity leave. The discrimination on female labor forces them to accept a relatively lower wage compared to males. Zhang et al. (2008), by analyzing the China Urban Labor Survey/China Adult Literacy Survey, show that that little of the observed gender gaps in employment status and earnings can be explained by woman disadvantages in human and political capital. Instead, gender gap is strongly related to family status. Developed countries try to mitigate the discrimination by means of imposition of labor institutions such as laws and regulations. For example, firms may face a big penalty when discriminating women and the cost of maternity leave can be largely covered by SSP rather than firms themselves. China wants to mimic such measures but the results seem not satisfactory mainly because the law enforcement in China, as many other developing countries, is fairly weak. Figure 5 shows that in 2004 most industries hire significantly more males than females as the female employee shares in most of the industries are well below 50%.

Figure 5. Female Employee Share

Source: China Industry Survey 2004.

Difference in education and training is usually deemed as the main reason for wage inequality. Figure 6a shows two interesting characters. First, Firms under different ownership structure have similar skilled-labor intensity patterns across industries. Second, the average wages are positively related to skilled-labor intensity[7] in a significant wage. Based on my calculation, the correlation suggests that skilled labor intensity could help to explain as much as 35% of the inter-industry wage difference. And an inequality can be justified since skilled workers possess higher productivity than the unskilled and therefore should be paid more in a competitive labor market. Furthermore, since most technology innovations took place in skilled labor intensive industries, the wage disparity should be further enlarged. However, even if (enlarging) wage disparity is the outcome of market competition, it nevertheless can not shadow any other possibility such as market distortions. For example, it is repeatedly reported that unskilled workers, especially the rural ones, are suffering from various discriminations. Unskilled workers are in general not well educated and thus less likely to understand and make use of labor laws and regulations to protect their rights. In a predator-prey game, they are more likely to be paid lower wage and fewer benefits by employers. [8] In any event, China's government is aware that no sustainable economic development can be guaranteed with an exaggerated inequality. To mitigate the disparity problem, policies such as minimum wage are imposed. Regardless the implementation effect of the minimum wage policy, whether or not such policies can effectively help the unskilled labor rather than complicate the problem is a matter of debate.

Figure 6a. Skilled Labor Intensity



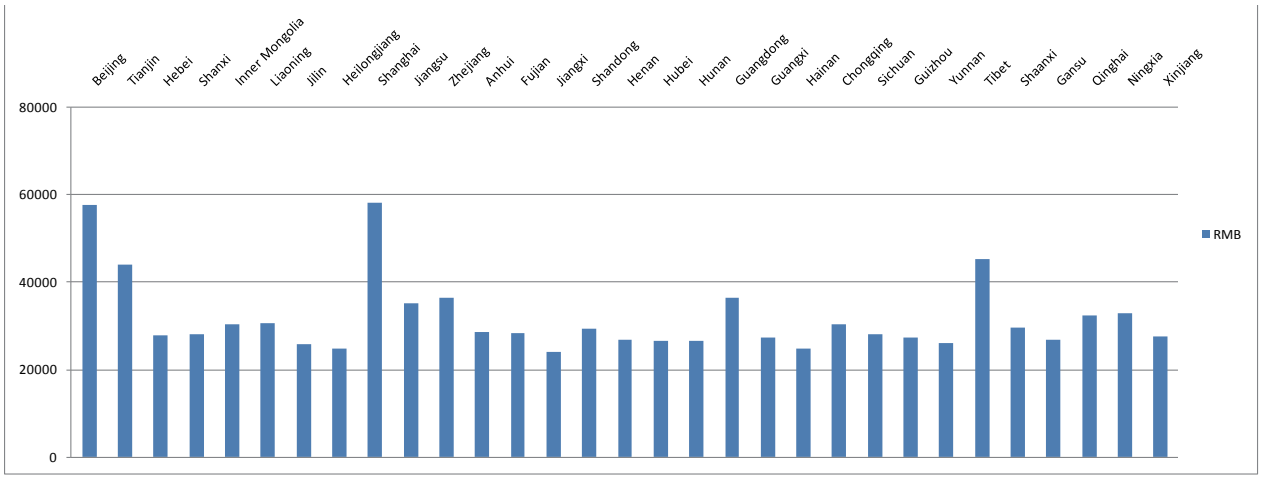
Source: Source: China Industry Survey 2004.

7 The skilled labor intensity is measured by comparing the number of employees possessing a high school degree or higher to the total number of employees.

8 Another shady way that employers tend to use is to ask unskilled workers to work for longer time or to provide less protection.

Market segmentation and the wage inequality between industries and regions is another outstanding source of inequality which mainly exists in developing countries such as China. Figure 6b shows that in 2009 the average wages paid to urban workers ranges from the lowest of 24K RMB in Jiangxi province to 58K RMB in Shanghai. While wage disparity across industries may be interpreted as the different premium paid to industry specific skills, the disparity across regions is more likely a result of political barriers. In China regional restrictions on both factors (i.e. labor) and goods are severe. For example, Hukou system is one of the most well-known restrictions on labor mobility. Local taxes, freight, etc. on logistics also segment China's market into pieces. It is calculated that the normalized transportation cost (including fees and taxes paid to the local governments) from Guangzhou (the capital city of Guangdong province which is surrounding Hong Kong) to Beijing is even higher than that from Guangzhou to Los Angles! (Xu, 2011) The regional barriers stem from the idea that regional protectionism may help local GDP growth (which is the main evaluation criteria for government officials) regardless the costs imposed on other regions. Some scholars even believe that China's sustainable development goal can still be achieved without persistent demographic dividend as long as the central government can effectively reduce regional protectionism. Furthermore, together with globalization, the inequality due to regional segmentation is enlarged. Wan et al. (2007) showed FDI and international trade contribute to nearly 20 percent of inequality across regions, and the contribution has been steadily growing overtime.

Figure 6b. Average Wage acorss Provinces



Source: National Statistical Yearbook (China): 2010.

2.5 Labor Institutions and Wage Costs

Before mid-1990s, labor laws or other labor institutions aiming at protecting and enhancing rights of labors were new to China. As a communism country workers should be, by law, the masters of the country and therefore their rights and benefits should be legally guaranteed. Though labor unions are available in most of the SOEs (including COEs), they (still) are rather auxiliary administration branches than independent units for the benefits of its members (incumbent workers). The marketization in labor market brought China not only great gains from more efficient labor allocation but unemployment and wage/ income inequality.

In response to the side effects of labor marketization, China's government carried out the following three measures: re-employment plan, social security program, and a series of labor laws.

The re-employment plan was initiated simultaneously with the permission of lay-off in SOEs. The plan tried to help those lay-offs to be reemployed in other firms after subsidized (mostly free) trainings and education on popular skills. However, the re-employment plan has two limits: the first is that it is only limited to urban residents (i.e. those with Hukou). Rural workers are not included and thus this plan was treated as an evidence of discrimination against rural workers. Second, the plan may work well for young workers who still have enough capability of learning new skills.[9] The middle age workers, however, became the so called "miserable generation" since they in general do not have enough education background to learn new skills and have to spend a great fraction of their time on family.[10] To help those who need longer time to be reemployed and reduce the social burden imposed on SOEs, the SSR was then carried out.

The SSR in China basically includes three parts: unemployment insurance, retirement benefits, and medical cares. Other fringe benefits may also be included in the extended SSR. Just like the reemployment plan, SSR initially covered only urban workers with Hukou. Due to the fast urbanization and larger scale of labor mobility, the SSR is required to have a broader coverage since the migrant workers, from rural areas or other cities, also contribute to the local SSRs via tax payments. In order to retain and attract the needed labor (including those skilled ones), some cities have already started to relax the requirement on joining SSR. For example, Shanghai government now allows SSR participation as long as the applicants

9 Most of them spent their like in rural areas rather in school when young due to the Great Culture Revolution.
10 The senior workers, on the other hand, can choose the "early retirement"

have legal I.D.s and are employed by a Shanghai-based firm. In other words, Hukou is not necessary for SSR anymore. The SSR helps to alleviate income inequality problem, but it essentially can neither solve the discrimination problem nor the labor abuse problem.

China's government started to regulate labor market during its marketization process by passing the first labor law in China in 1994 after liberalization (in 1949). However, the impact of this law was negligible: on the one hand the workers, whom the law was designed to protect, did not have incentive to defend its rights since a huge pool of rural migrants and the urban lay-offs were waiting for job vacancies; on the other hand, local governments were reluctant to implement the law too because they were afraid that the law may, if strictly implemented, undermine the local competitive advantage on labor intensive industries and in turn slow down the economic growth.

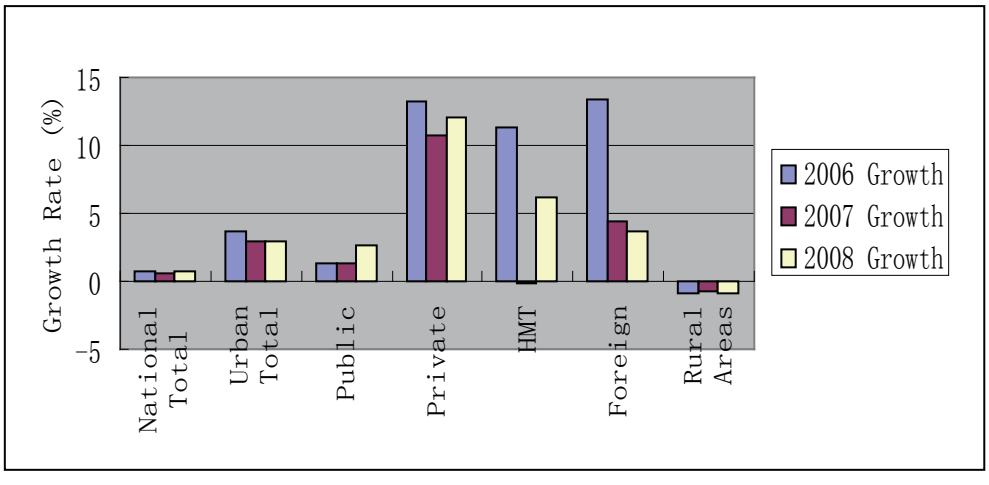
Thanks to the fast economic growth, unemployed labors have been rapidly absorbed. At the same time, new generation of workers have much better awareness of law and require improvement on legislation for labor protection. To effectively protect the legal rights of labor, China's government exerted several labor regulations and laws after 2000. For example, China's national government passed the first "Provisions on Minimum Wages" in Dec.30, 2003. Regional governments have had to increase the minimum wage standards accordingly. Regions, such as Shanghai and Guangdong province, adjusted their minimum wage standards almost every two years and the increment exceeds 10% each time. In 2008 China's national government passes three laws on labor market: Law of the People's Republic of China on Employment Contracts, Law of the People's Republic of China on Promotion of Employment Order of the President of the People's Republic of China, and Law of the People's Republic of China on Mediation and Arbitration of Labor Disputes. The three laws have been by far the most comprehensive laws which aim at guaranteeing and protecting the enforcement of labor contract, the fairness of joining local SSR, and anti-discrimination on labor. (Cai, 2010a) The labor laws, particularly the Law of the People's Republic of China on Employment Contracts, are deemed to strengthen the implementation of minimum wages. (Ding, 2008)

However, soon after passing these laws, the global economic crisis broke out. The criticism voices arose: on the one hand, the laws would strikingly increase the wage costs to producers and undermine their competitiveness from factor supply side; on the other hand, global crisis would certainly generate an enormous demand shock to producers too. The double shocks may result in a wave of bankruptcy which would eventually hurt labor employment. According to the data released by China's National Development

and Reform Commission, more than 67 thousand medium or small scale firms [11] were bankrupted in the first half year of 2008.

It is worth noting that such evidences are rather a regional phenomenon than a national one, the negative shocks of labor laws and minimum wage regulations seem not so serious as scholars predicted. Figure 7 shows that though the employment growth slowed down in 2008 during crisis, they were quickly recovered in 2009 in public, private, and HMT sectors. And the overall national employment growth kept its modest but positive pace during the crisis. It is puzzling to some scholars that the private sector, which is supposed to be the most vulnerable sector in crisis, still kept its fast employment growth. From my point of view, the puzzle results from two reasons: first, during crisis workers are more cautious on their jobs and become more tolerant to a lower hourly wage or longer working time (without additional payment); second, the law enforcement level is various across regions. Some regions, especially those inland provinces even compete for investment for its loose implementation of labor laws and regulations. In other words, the incentives for regional government to supervise the exertion of labor laws are weak.

Figure 7 Employment Growth in 2006-2008



Source: National Statistical Yearbook (China): 2010.

11 The medium and small scale firms are referring to those whose registered capital stocks are below 5 million RMB.

3. Concluding Remarks and Policy Suggestions

In this paper I first review the evolution of China's labor market after its urban economic reform since 1984. Due to the relaxation of Hukou requirement in labor market and the dual labor market structure, the largest internal rural-urban migration in the world was witnessed in China. The so called rural workers contributed to China's economic growth in a significant way in the past two decades. However, China did not seriously establish its modern labor market institutions until mid-1990s. In mid-1990s, SOEs were allowed to lay off redundant (urban) workers for the first time and urban unemployment problem has emerged since then. In response to the unemployment problem and other problems such as income inequality, China's governments introduced various labor laws, regulations such as provisions of minimum wage, re-employment plan, and social security program.

In section 2, I detail the five major issues in China's labor market: Rural Migration Workers and the Lewis Turning Point, International Trade and Labor Market, Employment in SOEs versus Private and Multinational Firms, Enlarging Income/Wage Inequality, and Labor Institutions and Wage Costs. These five issues indeed are logically linked to each other. For example, whether or not we are approaching to the Lewis Turning Point determines if we can still keep our competitive advantages in labor-intensive industries in international market since the wage costs may quickly increase after the point. The reform in SOEs and huge amount of rural migration workers incur the social attention on income inequality and protection concerns on the social vulnerable groups. In turn, we urge instant and effective improvement in labor institutions.

The complication of the twisted five issues results in my policy suggestions and critiques not directly aiming at these issues themselves but the sources of them. In my point of view, these five issues stem from the following three sources: regional discrimination, central-local government incentive incompatibility, and lack of marketization and institutionalization.

First of all, China still has a large pool of rural labor and to further reduce the mobility barriers due to policy discrimination may generate significant gains from demographic dividend as it did before. The key to remove the discrimination such as Hukou is to remove the privileges of urban residents, especially those in metropolis such as Beijing and Shanghai. [12]

Secondly, China's central government should be aware that the current problem in labor institutions

12 Urban residents, especially those in Shanghai and Beijing, typically have the privileges on high-quality education, medical cares, and other social benefits such as subsidized food.

is not about the sophistication but the enforcement. In many cases, it is not incentive compatible to a local GDP maximizing government to enforce the institutions as the central government desires. The central government may change the objective/evaluation function of the local government from GDP maximizing to institution supervision. The change can, if successful, also help to effectively remove the regional protectionism which seriously hinders China's sustainable growth.

The last but not the least is that China's government should realize that market mechanism is the first best method to achieve labor market efficiency. Regulations and other institutions can be used only if market fails (which is admittedly not rare in immature market such as the China's one). Using regulation aggressively to replace the market mechanism has been repeatedly proved irrational. For example, in economic analysis minimum wage policy is rational only if the labor demand is distorted (i.e. the demander has monopoly power). However, in most cases, such demand distortion is not serious and thus the minimum wage policy is found hurt the labor indeed since it may drive up unemployment by forcing producers to use labor substitution technology.

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