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An Interpretative Survey of the 'Turning Point' Debate**

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Economic Transition and Labour Market Dynamics in China: An Interpretative Survey of the ‘Turning Point’ Debate

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Abstract: Has the Chinese economy approached the ‘Lewisian turning point’ that marks the ending of the initial phase of industrial transformation fueled by surplus labour? In this paper we undertake an interpretative survey of the literature on this issue, in the context of China’s labour market conditions prior to the reforms and structural change of the past three decades. The available evidence is mixed, and our assessment makes a strong case for probing institutional constraints to labour mobility from an economy-wide perspective, going beyond the confines of the rural economy.

Key words: China, Lewis model, Surplus labour, economic transition

JEL Codes: O15, O14, O53, J30

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1. INTRODUCTION

China’s enormous economic boom, which is now well into the fourth decade, has been fuelled by the absorption of a vast pool of surplus labour that had been bottled up in the pre-reform economy. According to the official statistics¹, the Chinese peasants moving from the countryside to modern sector activities — the so-called ‘floating population’ — increased from about 53.5 million in 1975 to over 268.9 million in 2013. In addition, restructuring of state owned enterprises (SOEs) resulted in the movement of over 40 million from the state sector to the booming private sector.

In recent years, there have been growing concerns in the China policy circles whether this easy phase of economic transition fuelled by surplus labour is rapidly coming to an end. The concern was first prompted by a spate of media reports on anecdotal evidence of rising wages and scattered signs of worker shortages in rapidly growing coastal provinces, particularly in the Guangdong province, which began to appear from about 2004.² These concerns soon spawned a large literature on this issue, using the celebrated Lewis model of economic growth as the theoretical foundation. The bulk of these studies confirm the general media view that China is either close to, or has already reached a turning point in economic transition; labour has become a scarce commodity that is compensated in a competitive neo-classical fashion (wage equals marginal product of labour) as in the typical mature economy. However, a number of studies, which have analysed the wages and employment patterns by paying attention to China’s unique institutional and policy-induced barriers impacting on labour mobility, argue that China’s labour markets are not yet fully geographically integrated.

The purpose of this paper is to contribute to this debate through an interpretative survey of this literature in the context of China’s labour market conditions prior to the reforms and continuing structural transformation of the economy towards a market-oriented system. Whether China has run out of surplus labour has significant implications for understanding China’s future growth trajectory and development policy. If the economy is rapidly moving away from the initial surplus labour conditions, there is a clear national need for greater emphasis on setting the stage for sustained growth through capital deepening and technical progress. Otherwise, the country could run the risk of falling into the so-called

middle-income trap. On the other hand, if surplus labour conditions persist, a premature policy shift in that direction could run counter to the objective of equitable growth. A premature industrial transition toward more capital- and technology-intensive sectors and shifting labour-intensive industries overseas could effectively preclude a substantial number of workers from joining the industrial sector of the domestic economy and pose a threat to the very legitimacy of market-oriented reforms. Apart from its relevance for China's national development policy, a systematic analysis of China's labour market situation is relevant for informing the contemporary debate about the role of China in the evolving international economic order. The issue is also of great interest to those countries and companies trading or competing with China in manufactured products.

The paper is organised in four sections. Section 2 presents a synthesis of the Lewis model, focusing on its key predictions and the issues involved in its applications to analysing labour market adjustment in the process of economic transition. Section 3 sets the stage for the ensuing analysis by providing an overview of the initial labour market conditions and the key elements of labour market reforms. Section 4 examines labour supply and deployment patterns in the reform era with a focus on the apparent inconsistency between rapid growth in aggregate urban wage rates and the prevailing labour market conditions. Section 5 summarises the key findings and policy inferences.

2. A SNAP-SHOT VIEW OF THE LEWIS MODEL

The Lewis model considers an economy with two sectors, 'modern' (capitalist) and 'traditional' (subsistence), such that the modern sector grows by recruiting labour from the traditional sector (Lewis, 1954, 1958, 1972 & 1979). The modern sector includes industry and services in which the neoclassical profit maximisation rule applies and thus labour is paid the value of its marginal product. The subsistent sector is broadly defined to encompass the rest of the economy where the modes of production use little capital and simple technology, and a vast majority of people therein (farm labourers, handicraft workers, domestic servants, and petty traders) live at or near the subsistence level.³

In the traditional sector there is not enough work to employ the entire workforce full-time, year around; a situation of 'under-employment' or 'disguised unemployment'. The wage rate in that sector is 'institutionally determined' at or near the subsistence level.⁴ The modern sector, therefore, can hire unskilled workers at a fixed wage rate, which is set slightly above the subsistent rate to compensate for the higher costs of living in the modern sector over the

subsistent economy. Capital formation and technical progress in the modern sector do not, therefore, raise wages but increase the share of profits in national incomes, resulting in a continuous upward shift of the demand for labour. Growth process continues as a positive feedback process of increased profits leading to expansion in investment, employment and output up to the point where the surplus labour pool in the traditional sectors is depleted. This is the so-called 'Lewisian turning point'. From then on, the economy is in a world of neoclassical economics; wages in the two sectors begin to move in concert with marginal product of labour, very much like in a developed economy.

It is important to note some key aspects of the growth process captured in the model, which are often overlooked or misinterpreted in its application. First, the assumption that the supply of labour is practically unlimited applies only to unskilled labour. At any time, skilled labour, just like capital or land, could become a bottleneck in expansion of the modern sector. 'Skill labour, however, is only a *quasi-bottleneck* in the sense that if the capital is available for development, the capitalist or their government can provide the facilities and training to improve the skill of labour' (Lewis, 1954, p. 145).

Second, the term 'unlimited labour supply' means that at the existing wage the supply of labour is far greater than the demand in the modern sector. In various subsequent applications of the model starting with Fei and Ranis (1964), this term is often used to imply a zero marginal product in agricultural production. But this stark assumption is made 'for purely diagrammatic and or mathematical convenience' (Ranis, 2005). As Lewis put it in a retrospective paper, the basis point is that the wage rate in the traditional sector is institutionally determined at or near the subsistence level: 'we need not make a pettish of "infinite" elasticity; "very large" would do just as well for our purpose' (Lewis, 1979:218). If wages are determined by income sharing, we would in fact expect to see a gradually rising real wage, as wage setting takes into account rising levels of that average wage (Ranis, 2004). Also, when some workers are withdrawn, some of those left behind are likely to adjust by working harder or reorganising production in some other ways (Sen, 1967).

Third, when analysing the labour supply situation based on wage trends, we must distinguish between exogenous and endogenous changes. The model incorporates only endogenous changes in wages directly resulting from the transfer of labour from the traditional to the modern sector. The Lewis turning point is, therefore, not a swing phenomenon, but the inception of a long-term historical trend in the process of economic development. Periodic rapid increase in wages due to exogenous influences does not mean

that the turning point has reached. Such influences can take many forms. Farmers could begin to grow a profitable crop for exports, or may learn to use fertiliser, leading to rise in rural wages. The modern sector expansion can contribute to the modernization of ideas and institutions in the traditional sector resulting in increases in labour productivity and wages. Government minimum wage legislation also can lead to wage increases. It is possible that the process of absorption of labour may end prematurely before surplus labour in the subsistence sector is fully exhausted, owing to checks to the expansion of capitalist surplus. A combination of unions and large-scale employers are able to exploit economies of scale, and therefore less troubled by competition from small-scale producers. Employers or unions could enforce restrictions on recruitment and this could result in rapidly rising wages (Lewis, 1979). Given the consideration of efficiency wage (that is, the need to pay higher wages to induce better labour performance, greater commitment, reliability among workers), modern sector firms may pay workers above market-clearance rates in order to maintain high levels of productivity in the management of expensive capital equipment. Wage increases could also reflect shift in industry composition in favour of foreign invested enterprises because managerial practices of these firms have a tendency to pay higher wages as compared to local firms (Rawski, 2006; Hale and Long, 2011).

Wage increases at a given point in time caused by direct government intervention, trade union action or other exogenous influences can have a lingering effect on the wage trend, resulting in a pseudo wage increase in the context of surplus labour (Reynolds, 1965). Suppose the government raises the wage to a level above the going rate and labour supply is unlimited as before (but now becomes unlimited at a higher real wage level). The wage increase stimulates firms to make labour-saving innovations so that the labour productivity schedule is shifted to a new position with lower employment at a higher wage rate. With persistent expectations, the upward shift of wage is repeated in the next period, and the similar management adjustment follows. If the government wage policy is aggressive, and if the management is very successful in saving labour, the new labour absorption path may be quite steep – large wage increases along with small employment increases. It would look like a conventional upward sloping labour supply curve, but is actually the locus of demand and supply interactions that is shifted upwards in successive time periods, during each of which labour supply still remains unlimited. The first response is an artificial increase in wages, but over a long period, we see step function made up of annual unlimited supply of labour segments, which is economically difficult to distinguish from a genuinely rising supply curve.

Finally, the Lewis model assumes that workers who move from the traditional sector to the modern sector ‘earn more in the modern sector, have better opportunities for their children, and rise at least a notch in social status’ (Lewis, 1979: 212). Therefore, the impact on the migration decision of possible discrimination against migrant workers within the modern sector, and labour market implications of remittances by migrant workers to the households left behind in the traditional sector, are beyond the scope of the model.

3. INITIAL CONDITIONS AND THE POLICY CONTEXT

At the time when market-oriented policy reforms started in the late 1970s, China’s economy, as it had evolved over four decades of central planning, was a classic example of a dualistic, surplus-labour economy. There was ample surplus labour both in the rural area (disguised as under-employment in the communes) and urban area (predominantly in the form of under-employment in the state-owned enterprises and communes) (Eckstein, 1977; Rawski, 1979; Putterman, 1992).

In 1958, the government introduced the *hukou* system of household registration, confining people to the village or city of their birth, to ensure enough agricultural labour to produce sufficient grains to support the urban industrial sector (Banister, 1987; Cheng and Selden, 1994; Chan, 2009). The *hukou* system, which took shape in the course of the subsequent decades, erected a strong wall between the city and the countryside, brought urban-rural migration virtually to a halt and exercised iron controls over residential and work patterns in cities and the countryside. Heavy population pressure on scarce land, coupled with stringent controls on the migration of labour from the countryside to urban areas, meant that most rural labour remained bottled up in relatively low-productivity farming and small-scale rural industry.

There was also some government-directed urban to rural migration, which compounded surplus labour conditions in the rural economy. The most highly publicised groups of urban-rural migrants were city-born middle school graduates (‘sent-down-youth’), who were relocated in the countryside during the Cultural Revolution of the late 1960s and early 1970s. By December 1978, a total of 17 million urban youth had been sent to the countryside (Banister 1987: 341). There was also movement of Communist Party carders to areas which the government wished to bring under tight control, and movement of technically skilled personnel for economic and social development of the sparsely populated and border regions.

Urban workers were administratively allocated to a de facto job tenure system in urban work units with state enterprises at the apex, followed by collective enterprises run by various levels of the government. The government provided urban workers with life-time employment, centrally-assigned wages, generous fringe benefits, housing and children's education, a system vividly captured by the Chinese expressions of 'the iron rice bowl' and 'cradle to grave welfare'.

Since the early 1980s, China has gradually relaxed restrictions on labour mobility as part of economic liberalisation reforms (Banister, 1987; Meng, 2000; Tao, 2007; Chan, 2009). With the introduction of the household responsibility system during the 1970s and early 1980s, farmers were permitted to work freely in nearby town-village enterprises (TVEs). The process gathered momentum following Deng Xiaoping's tour to Guangdong in 1977 and the decision to set up the Special Economic Zones - first in Guangdong and Fujian in 1979, and subsequently in other coastal provinces. The governments in these provinces were permitted to enact rules facilitating labour inflows to small cities or towns. Further relaxation on restrictions to labour mobility took place following China's accession to the membership of the World Trade Organisation in 2001. In February 2004, the central government endorsed migration as a key vehicle for increasing the incomes of farmers, and introduced a number of measures to encourage migration including the elimination of additional fees charged on migrant children in urban schools (Cai et al., 2008; Knight et al., 2011). Under a new *hukou* policy announced on 23 February 2012, eligibility criteria for obtaining urban *hukou* status were substantially relaxed in small cities at the county level as well as medium-size cities (Yao, 2014). *Hukou* status in these localities was made open to anyone who has a stable job and residence (including rental homes).⁵

Despite these changes, the *hukou* system still remains one of the most enduring remnants from the Communist era. The labour market still remains highly segmented, with various obstacles to labour mobility between the urban and rural areas, and between the formal and the informal sectors. Almost 72 per cent of Chinese population is still identified as rural *hukou* (Meng, 2012: 77). A key remaining feature of *hukou* is that only those with urban residency permits ('urban *hukou*') have the right to live permanently in cities. Only the wealthy or highly educated can obtain *hukou* in large cities and get their *hukou* status changed to move from towns or small cities to large cities (Wu and Treiman, 2004; Liang and Ma, 2004; World Bank, 2005). Migrants without urban *hukou* status do not have equal access to social welfare programs such as social insurance, schooling and subsidised housing. Given these restrictions, rural-urban migration in China still operate under a guest worker system

whereby workers move to cities to work when they are young and unmarried, and return to their rural homes when they need to form families. By and large, individuals with family responsibilities do not migrate (Meng, 2014).

In the pre-reform Chinese economy, there was no large urban informal (subsistence) sector with a reserve army of unskilled workers. However, public enterprises were generally characterised by significant overstaffing (Cai et al. 2008, Brandt et al., 2014). Also in the early 1980s, tens of millions of sent-down-youth returned to the cities, creating an urban informal labour market (Banister, 1987; Meng, 2012).

In 1997, the government moved ahead with restructuring state-owned enterprises (SOEs), ending the 'iron rice bowl' of guaranteed employment and benefits for urban workers. Because of privatisation (mostly of small and medium-scale enterprises) and mergers and closures of loss-making ventures, the number of state-controlled firms dropped from 300 thousand a decade ago (which employed 20 per cent of the country's total labour force) to 150 thousand in 2005 (Bergsten et al., 2006: 23–24). The contraction in the number of SOEs, coupled with downsizing and restructuring of the existing SOEs, resulted in a dramatic decline in SOE employment, from a peak of 113 million people in 1995 to 65 million in 2005. This augmented the labour availability for the private sector (Naughton, 2007, pp. 179-208). However, the SOE sector still provides employment to nearly one-fifth of the urban labour force (Yu, 2014). The remaining SOEs are mostly large-scale firms in manufacturing with high capital intensity in which employment and remuneration practices are far from being subject to market disciplines. Privatisation of SOEs contributed to 'informalisation' of the labour market with a large number of laid-off workers engaging in temporary, seasonal or hourly-paid work in the urban private sector (Cooke, 2011; Yao & Zhong, 2013).

During the first two decades in the reform era, the rapid expansion of the private sector was not accompanied by labour regulations and measures for improving workers welfare⁶. Chinese unions were not independently established by workers but operated in a constrained institutional environment. However, in recent years, the government has begun to pay attention to better labour protection. In response to growing domestic media coverage of exploitative working conditions and as part of a broader attempt to reduce social conflict, the government has instituted a series of labour legislations and also encouraged the All-China Federation of Trade Unions (ACFTU)⁷ to play a larger role in protecting workers' right. Starting in 2008, 11 major labour laws or regulations have been enacted or revised.⁸ Under the Labour Contract Law, which took effect from 1 January 2008, workers are entitled to

demand non-fixed term contracts after signing two successive fixed term contracts or after being employed for 10 years by the same employer. The law also includes an expanded role for the trade unions in negotiating collective contracts and determining workplace rules and layoffs (Friedman & Lee, 2010). The ACFTU remains under the tight control of the government, and at the firm level members of the top management often headed unions. But recently the government has begun to back the ACFTU's efforts to harmonise labour relations in the market place, as a strategic move to pre-empt the development of an independent labour movement. ACFTU has set promoting collective wages bargaining and signing employment contracts as one of its top priorities.

Against the backdrop of these significant changes in the labour market regime, labour unions in China have made major progress in recent years. By the end of 2009, there were 1,985 million grass-root labour unions, more than double that of 2003. Union membership reached 226 million or 53 per cent of urban workers, with an increase of 93 million over the previous five years. In the past few years, there have been mounting worker protests in China, including wildcat strikes (such as, the strike in one of the Honda factories) and street protests by laid-off workers (Friedman and Lee, 2010; Yao & Zhong, 2013).

4. LABOUR MARKET TRANSITION

Since the economic reforms began in 1978, China's labour market has undergone remarkable transformation. There has been a large transfer of labour from the rural to the urban economy, with significant reallocation between state-owned and non-state sectors in the urban labour force. Between 1990 and 2012, the number of peasants migrating to urban areas averaged nearly 8 million per year. Rural migrant workers in the cities increased from around 25 million in 1990 to 159 million in 2012, the largest ever human movement in recorded history within such a short period (Meng, 2012; Li et al., 2012). According to the Rural Household Survey conducted by the China National Bureau of Statistics (NBS), migrant workers employed in urban areas accounted for 27 per cent in 2009, up from seven per cent in 1995. In addition, public enterprise reforms added more than 40 million workers to the private sector labour supply (Appleton et al., 2002). Also, opening up of the coastal provinces to foreign direct investment, and the relocation to mainland China of production bases of export oriented manufacturing from Hong Kong put an end to the migration of Chinese workers to Hong Kong (Vogel, 2013). This structural transformation in the deployment of the labour force served as the major driving force of China's phenomenal economy growth and meteoric

rise in the global economy over the past three decades (Bergsten et al., 2006; Bosworth & Collins, 2008).

Whether the surplus labour pool has been fully absorbed into the modern sector of the economy ('has China reached the Lewis turning point?', as it is often paraphrased in the contemporary debate) is central to understanding the future course of China's economic transition and for informing the policy debate on the future directions of China's development strategy. Over the past two decades, a sizable literature has developed on this issue. The bulk of these studies have focussed on wage trends, while some studies have directly examined labour supply by paying particular attention to labour market conditions in the rural economy. The following survey of this literature is thematically structured in terms of these two key themes. In the final subsection we also examine, with some fresh data tabulations, functional distribution of income during the process of China's economy transition, which is pertinent to testing of the turning point hypothesis but has so far received only scant attention in the debate.

4.1 Wage trends

There are two official sources of wage (and employment) data in China that are updated annually. Data for legally-established urban enterprises are collected by the Ministry of Human Resources and Social Security and included in the *Statistical Yearbook* compiled by the National Bureau of Statistics (NBS) and published by the National Statistical Press⁹. Data for manufacturing units located in town and village enterprises (TVEs), are compiled and reported by the Ministry of Agriculture in the *Town and Village Enterprise Yearbooks*. In the Chinese national data-reporting system, TVEs are treated as part of the rural economy and therefore the wages of workers employed in these enterprises are not covered in the reported urban wages data. Almost two-thirds of manufacturing workers are employed in TVEs¹⁰.

A number of studies have examined Labour market conditions based on data from urban household survey (Garnaut and Huang, 2006; Islam and Yokota, 2006; Yang et al., 2010; Cai, 2012; Li et al., 2012). According to these data, real wages remained virtually stagnant well into the mid-1990s. Since then, there has been a persistent increase both at the provincial and national levels. Between 1988 and 2013, real average annual earnings rose by five folds, from 3,880 Yuan to 19,674 Yuan. Intra-regional wage differentials have become trivial: by 2013, coastal wages were merely 5.3 per cent higher than in the Central regions, and 3.2 per cent higher than in the Western regions.

The data from the urban household survey do not, however, provide a realistic picture of wages received by unskilled workers, in particular of those who have migrated from the country-side, because of the segmented nature of the urban labour market (Rawski & Xiao, 2001; Banister, 2005; Perkins, 2013). A major limitation is the excessive focus on urban industrial workers to the near exclusion of detailed data on the more numerous manufacturing employees working outside the administrative boundaries of cities. Even within the cities, data collection and reporting remain concentrated on the rapidly declining state-owned enterprises (SOEs), urban collective-owned manufacturing enterprises and foreign invested enterprises (FIEs), giving growing private manufacturing short shrift. More importantly, the household survey does not cover workers who live in a given city for less than six months. This invariably results in leaving out a significant percentage of migrant workers because even those who live more than six months in an urban area often move from city to city within a year.

SOEs and FIEs cover mainly the upper strata of the urban labour market and have a relatively smaller percentage of migrant workers in their workforce than the local private enterprises. Reflecting the legacy of egalitarian compensation in the state sector, state sector workers earn significantly more than those in domestic private firms (Appleton et al., 2005). The wage premium of the state sector in comparison with the non-state sector has increased over the past two decades, contributing to urban wage inequality (Xia et al., 2014). There is also evidence that FIEs generally pay higher wages, contributing to rapid growth and inequality in urban wages (Xu & Li, 2008; Xia et al., 2014). As part of the labour market transition, wage determination in FIEs and other large private sector enterprises is now increasingly driven by workers' qualifications and experience rather than mere labour scarcity (Xu & Li, 2008; Li et al., 2012)

Given these limitations of the coverage of urban household survey data, one can suspect that urban wage increases in recent years reflect the intensification of union actions and natural (market-driven) increases in skilled workers' wages, rather than the tightening of the market for unskilled labour. There is evidence that the recent large wage increases, which attracted wider media coverage, are not across the entire urban sector but the outcome of wildcat strikes in a handful of FIEs (Friedman & Lee, 2010). Based on a survey of 1,268 firms in 12 cities, Yao & Zhong (2013) find that unionisation is significantly associated with higher hourly wages and larger pension coverages, but, by 2008, only 12.5 per cent of migrant workers had signed labour contracts and among them, 60 to 70 per cent were short-term contracts under one year (Friedman & Lee, 2010: 509)

Presumably, TVE wage data better reflect labour market conditions facing urban unskilled workers as compared with the aggregate wage series or wages relating to workers in other types of firms (Banister, 2005 & 2011; Cooper, 2006). The majority of TVEs (about 94 per cent) are located in ‘rural areas’ (by the official definition) and they employ largely unskilled rural workers whose employment decisions are presumably and closely tied to agricultural income. TVEs are a temporary resting place for migrants from the countryside who are seeking jobs in large-scale enterprises. Foreign and domestic manufacturers who are eager to keep down their costs (for example, by getting away from the requirements of paying social insurance and other welfare obligations) would prefer their factories to be classified as rural or TVEs. Based on these considerations, Cooper (2006) uses TVE wages as the best available indicator of China’s unskilled worker wages.

Manufacturing employment and wages (hourly compensation of workers) in the urban sector (covered by the official urban employment data discussed above) and in TVEs are compared in Table 1. The share of TVE workers accounted for 64.4 per cent of total manufacturing employment in 2009, up from 55.6 per cent in 2002¹¹. Interestingly, the data indicate a vast wage gap between the two sectors: on average TVE wages amounted to only 42 per cent of urban wages during 2002-2011, and the gap has remained markedly stable, notwithstanding faster growth of TVE employment. It seems that China’s labour market conditions provides firms with ample flexibility to achieve significant cost advantages by relocating operation in, or subcontracting firms located in, the TVE sector (Rawski, 2003).

Table 1 about here

However, the available data on TVE wages need to be treated with caution because of two reasons. First, the geographic coverage has significantly changed over time with changes in the boundaries of urban areas. Second, until 2007, the definition of TVE manufacturing employment included workers employed outside established enterprises (namely, those who were self-employed, worked in household, neighbourhood or other manufacturing groups). Since then, China’s official statistics on TVE manufacturing have excluded these informal workers. This could have resulted in an upward bias in the reported TVE wages as an indicator of unskilled worker wages (Banister, 2011). A more meaningful analysis of the tightening of China’s labour market therefore requires focussing specifically on wages of unskilled workers.

Li et al. (2012) examine trends in unskilled workers' wages using data extracted from the urban household survey for the period 1988-2009. They found that unskilled workers' wages rose in both more-developed coastal regions and less-developed inland regions, but the coastal-inland gap widened because of the faster growth of wages in the former regions. Real wages in coastal and inland regions grew at an average annual rate of approximately 8.7 per cent and 7.7 per cent respectively. In 1988, the average wage of urban unskilled workers was 816 Yuan compared to 640 Yuan in inland regions. The comparable figures in 2009 were 4,992 Yuan and 3,229 Yuan respectively. The analysis in this paper, however, does not allow for the fact that urban workers receive higher wages compared to migrant workers because of the wage premium attached to the urban residential status. Given China's unique institutional and policy-induced barriers to rural-urban migration, migrant workers are engaged in jobs at the lower end of the wage distribution (Meng and Zhang, 2001; Meng, 2012: 91).

Cai & Du (2011) and Cai & Wang (2010) use data from the Urban Labour Force Survey conducted by the Institute of Population and Labour Economics at the Chinese Academy of Social Sciences to examine wage differentials between migrant workers and urban *hukou* workers in five cities between 2001 and 2005. The survey covered 1,500 migrant workers and 3,400 urban workers. They find that migrant workers' hourly wage increased more rapidly (from 3.5 Yuan to 4.6 Yuan) than that of urban workers (from 5.7 Yuan to 6.8 Yuan) between these two years. From this comparison, they infer that 'there was a serious shortage of unskilled labour'. There are two main problems with this study (Golley & Meng, 2011). First, the survey suffers from a sampling bias. It was residential-based and hence did not cover many migrant workers living in factory dormitories, construction sites or other work places. Second, the study has overlooked possible changes in average earnings possibly related to differences in the skill composition of migrant and non-migrant workers.

A number of studies have used data from self-conducted sample surveys to examine relative wages earned by migrant workers. Meng & Bai (2007) examined wage patterns of unskilled workers during the period 2000–2004 using a unique data set extracted from the payrolls of seven large manufacturing factories in Guangdong Province. A simple comparison of wages showed that the real wages of production workers increased at an average annual rate of only 3.5 per cent, compared with a rate of more than 6 per cent for the total sample of workers. Once variables like education and period of employment that could affect wage levels were controlled for, the average annual growth rate for the unskilled workers turned out to be negative or near zero.

Zhang, Yang and Wang (2011) analysed wage behaviour in rural China using data collected from a survey of 100 villages in a roughly representative sample of Chinese provinces and another survey of a large number of villages in the remote labour-sending province of Gansu. They found a striking increase in wage growth during both slack and harvest seasons in Gansu starting around the years 2003, an indication of significant tightening of the labour market. The authors pay special attention to the seasonality of work in rural agricultural and non-agricultural sectors, a distinction often ignored in studies seeking to identify the extent to which the 'surplus labour' pool is depleting. The paper also examines age selectivity of migration and consequences of the aging of rural population that could have major consequences for rural-urban migration. The study is important on its own right in understanding the labour market transition in rural China, but does not provide a direct test of the determinants of out-migration to urban areas.

So far the most comprehensive comparative study of migrant and non-migrant worker wages is that of Golley and Meng (2011). They examine whether there has been an 'abnormal' increase between 2000 and 2009 in real earnings of migrant workers compared to that of urban skilled workers. The analysis is based on data from a survey of urban migrant households and urban local incumbent households conducted under the RUMiCI project¹². The survey covered four major urban destination areas (Shanghai, Guangdong, Jiangsu and Zhejiang) and five rural source areas (Anhui, Hubei, Sichuan, Chongqing and Henan) of migrant workers. The sample of migrant workers covered those living in residential properties, factory dormitories and other places, and recorded changes in the skill composition of workers over time. According to this study, the growth of migrant workers' earnings during the period 2000 and 2009 had been largely offset by increases in the cost of living in cities, and the wage gap between migrant and urban workers had risen significantly as a result of much faster increases in earnings of urban workers. Golley and Meng (2011) supplement this finding with a comparison of wages between members of rural households who do not migrate and are fully employed in the rural economy and those who migrate. It is found (after controlling for age, education, gender and regional indicators) that migrant workers on average earn 52 per cent higher monthly earnings than those in farm jobs, and 15 per cent more than those in rural nonfarm jobs.

4.2 Labour supply

A number of studies have attempted to address the ‘turning point’ debate by directly focusing on the supply side of the labour market. For some of these studies the starting point has been the overall demographic trends (Cai and Wang, 2010; Cai 2012; Zhang et al., 2011 ; Li et al., 2013; Das and Diaye, 2013). China embarked on market-oriented reforms at a time when its population growth had begun to decline, mainly as a result of the rigid implementation of the one-child per couple policy in 1979. One-child policy was associated with a total fertility rate decline, from 2.8 per cent in 1979 to 1.8 per cent in 2012¹³. The average annual population growth rate declined from 1.4 per cent during 1985–1995 to 0.75 per cent during 1995–2012. China’s current (2013) population is 1.36 billion people and, based on current trends, it is expected to stabilise at about 1.46 billion by 2030 and decline to 1.13 billion in 2050; working age population will begin to shrink after peaking at 1,014 million in 2015 (United Nations, 2012). These studies have commonly interpreted the projected decline of labour force growth as a sign that the Lewis turning point has arrived or is imminent.

A major limitation of these aggregate (economy-wide) population projections is that they have ignored differences in demographic trends between urban and rural China. The one-child policy was not strictly implemented in the rural economy. So even though China has a shrinking urban *hukou* population, the new entrants to the labour market is likely to come primarily from the rural *hukou* population (Meng, 2012).

Even if the urban-rural differences in the population profile are ignored, projections of demographic patterns are not directly relevant to the ‘turning point’ debate: this debate is about the reallocation of the *existing* labour force in the process of industrial transition. The Chinese labour force is still vast, with 476 million (45% of the population) living in the rural economy, which still contributes to only 11 per cent of GDP. As we have discussed in the previous section, even though China has shifted from planned allocation of labour in state-sector jobs to a more open labour market, labour market reforms still remain incomplete in many respects. Therefore, one can still argue that the long-term demographic trends are not inconsistent with the existence of labour surplus, or perhaps, ‘labour slack’ in the economy. In the vast Chinese economy, ‘there are many rural and many urban economies, with imperfect mobility of labour among them, reflected in differing wage levels and material standards of living’ (Garnaut, 2010, p. 6).

One of the first attempts to estimate surplus labour in the agricultural sector was by Cai (2007) who came up with a figure of merely 40 million. This estimate is based on the

assumption that over-40-year-old rural workers lack the capacity to be reemployed in urban areas. More importantly the study has ignored the constraint imposed by the *hukou* system on labour mobility (Golley and Meng, 2011). If there were no stringent limits imposed on the period of employment, workers moving to urban areas at a younger age would stay a longer time, possibly throughout their productive life. Moreover, there are underlying difficulties with the assumption on which Cai's estimate is based. Delineating farm and non-farm workers is difficult, because there is a possibility of substitution between farm and non-farm work within the households. Many workers defined as non-farm workers are likely to do some farm work (Kwan, 2009). In estimating the potential rural labour surplus available to the modern sector, it is also important to take into account the possible mismatch between the urban labour demand and the rural labour pool in terms of the age profile of workers (Chan, 2013).

Minami and Ma (2014) test whether there is surplus labour in the agricultural sector by applying the standard marginal product rule, by comparing the marginal product of labour (MPL) with the prevailing (subsistence) wage (SW). The analysis involves estimating agricultural production functions by pooling data for 31 provinces over the period from 1993 to 2008 divided into three sub-periods: 1993-07, 1998-02 and 2003-08. In all three sub-periods, MPL turns out to be less than the SW, confirming the presence of surplus labour. During 2003-08, the share of surplus labour (estimated as a difference between total labour force and 'equilibrium labour' at which MLP is equal to SW, as a percentage of the former) amounted to 44.3 per cent in 2003-08, compared to 72.4 per cent during 1993-1997. The upshot is that the Chinese economy is approaching the Lewisian turning point, but there is still a sizeable surplus labour pool in the agricultural sectors. These findings are consistent with that of Minami & Ma (2010), Islam & Yokota (2008), and Ercolani & Wei (2010), who have examined China's labour market transition by applying the same methodology to a different datasets covering different time periods.

Wei and Kwan (2014) apply the same methodology to examine labour market transition at the provincial level using a large large prefectural level panel data set over the period 1996-2010. They find that, while most of the rapidly growing coastal provinces have approached or are rapidly approaching the Lewisian turning points, significant surplus labour conditions still prevail in most interior provinces. These results are consistent with the view that the highly-publicised labour shortages and wage increases in rapidly-growing provinces are a reflection of various constraints on labour mobility rather than the rapid depletion of the economy-wide surplus labour pool.

Yao & Zhang (2010) estimate the supply and demand of migrant workers in selected labour-sending provinces during 1998-2007. They estimated an endogenous switching model to estimate whether the national industrial wage lies on the upward sloping or flat segment of the supply curve. By estimating demand and supply functions of migrant labour in a structural framework that explicitly allows the supply function to have a portion of infinite elasticity as postulated in the Lewis model, they find that China rural wages are increasing, and this is primarily because agriculture has become more mechanised, squeezing out labour, but the labour supply is still perfectly elastic (that is, an increase in labour demand does not cause an increase in the wage rate).

Kwan (2009) uses province-level panel data, sourced from NBS statistical yearbooks, to estimate the stochastic production frontiers in Chinese agriculture and then calculate the amount of required labour in relation to the observed amount of labour. By estimating a production frontier with inputs and output, the difference between the frontier and the actual labour used is interpreted as surplus labour. In the paper, the labour force refers to the year-end number of workers, while there are no direct figures for farming workers. Official data reports rural labour force and agricultural labour force, which is the amount of workers in farming, forestry, animal husbandry and fishing. Farming labour force is estimated by multiplying the total labour force by the share of farming output to total output in these sectors. His estimates show that in 1980-2007, China's surplus labour in agriculture amounted to 138 million out of a total agricultural labour force of 276.9 million. The key inference of the paper is that 'China is still far from the end of the labour surplus phase' (Kwan, 2009, p. 358).

Knight et al. (2011) use data for 2002 and 2007 from the national household surveys¹⁴ to examine the size and composition of the pool of potential rural-urban migrants. The survey covers urban *hukou* households, rural households and rural-urban migrant households. The results point to the existence of surplus labour in rural areas (a large pool of non-migrants with a fairly high probability of migrating) co-existing with rising migrant wages in urban areas, and to binding constraints on rural-urban migration. There is also evidence of significant increases in real wages in the rural economy associated with rising rural household incomes, although it is not possible to distinguish whether the increases were exogenous (such as, due to the abolition of agricultural taxes and other fees for basic education) or endogenous to the migration process (for example, operating through the remittance channel). The paper concludes by alluding to the need for further research to broadening our understanding of the extent to which the perceived reasons for rural-urban

labour immobility (such as, being too old, needing to care for dependents, and failing to find migrant work) would fade as opportunities for migration improve and labour market policies adjust.

Golley and Meng (2011) undertake an in-depth analysis of the patterns of labour deployment and surplus labour in the agricultural sector. According to their findings, out of the rural labour force, 49.2 per cent were engaged in agricultural jobs, 29.5 per cent in rural non-agricultural jobs and 21.5 per cent migrated to urban areas. In 2008, rural non-migrant agricultural workers spent on average 154 days in the agricultural sector, while 3.4 days on rural off-farm jobs. If 300 days of work per year is considered as fulltime employment, 50 per cent of these workers work only part time and 46.7 per cent of rural agricultural workers work less than 150 days a year on average. In sum, the findings suggest that underemployment in the agricultural sector is 'extraordinarily high' (2011, p. 564) and earnings of those who are employed are well below those of their migrant counterparts.

Constraints to labour mobility

The mere presence of surplus labour does not, however, imply that this labour is readily available for urban employment. This is because migration decisions depend on a plethora of economic and non-economic considerations and institutional barriers. A study of the migration behaviour of rural people in Sichuan Province (the most populous and predominantly rural province in China) finds that although migration yields a large wage premium, rural people tend to choose to stay in rural areas rather than migrate because of the lack of safety during the transition and in destination cities, forced separation from families and the unavailability of suitable housing in destination cities (Zhao, 1999). These deterrents to migration are presumably largely associated with the *hukou* system under which migrants do not have legal rights to reside permanently in cities. An important implication of the findings of this study, which has also been confirmed by a number of subsequent studies (as surveyed in Zhao (2005)), is that the number of migratory workers would be higher in the absence of institutional barriers to migration.

Lee and Meng (2010) examine the determinants of rural-urban migration by applying a linear probability model to the data from RUMiCI rural household surveys. In addition to wage differentials between rural and urban households, they consider the role of the migrant's age and a number of family-related variables, such as migrant status, whether having grandparents in the family that help look after the children, and the number of children. According to this study, the actual (directly enumerated) propensity to migration

(that is, the percentage of rural workers who have left for urban employment) is 20 per cent. When the coefficients of family related variables are set to zero (that is, equivalent to removing all barriers to accessing social services due to institutional barriers), the probability of migration increases to 36 per cent. The increase in migration probability is much higher for women (38 per cent compared to the actual propensity of 15 per cent) than for men (35 per cent compared to actual propensity of 24 per cent). The estimated probability of migration is low for those belonging to higher age brackets (35-45 year-old, and 46 and above) as compared to those at younger age brackets. This suggests that the older people become more family responsible. All in all, these results suggest that there is a greater potential for increasing the proportion of the labour force that would migrate if institutional barriers to migration were to be removed. Lee and Meng (2010) combine their findings with the age profile of the rural labour force from the 2005 One per cent Population Survey to project rural-urban labour outflows up to the year 2025 under alternative scenarios of removing institutional barriers to urban-rural migration. The findings suggest that there is potential for substantially increasing the stock of rural migrants through policy reforms during the period under study.

These studies on obstacles to rural-urban labour migration in China have primarily focused on discrimination against migrants on arrival in urban areas under the *hukou* system. Barriers to migration out of rural areas (supply-side constraints) have received little attention. A potentially important supply-side issue that deserves close scrutiny is whether rural land tenure arrangements (land use rights) act as a constraint on the migration decision of rural labour. Notwithstanding the significant reforms to the Household Responsibility System initiated in the early 1980s, agricultural and forest land in China are still subject to what might be described as 'quasi-private property rights' (Kung, 2000; Minami & Ma 2014). Residential income rights and unencumbered user rights to land are now firmly established, but rights to land can only be transferred temporarily (through rental arrangements rather than selling outright). If all members of the family permanently leave agriculture, the farmers have to return the land to local authorities and consequently give up a stream of future land earnings. These incomplete property rights limit the extent to which land can be used as a collateral for financing migration. More importantly, incomplete property rights, combined with *hukou* constraint on permanent settlement in urban destinations, act as a key constraint on working in cities. This is because migrants who move to cities want to keep their land usage rights as a *de facto* welfare insurance to support them in case they lose their city jobs, fall ill or become disabled (Yang and Guo, 1996; Zhao, 1999).

Mullan, Grosjean & Kontoleon (2011) is the only available study that tests the impact of incomplete land use rights on migration decision of rural households in China. The paper first develops a theoretical model to postulate the impact of moving away from the existing property right arrangements to a property right regime characterised in a market economy. The model is then tested using data from a sample of household in two labour-sending provinces (Guizhou and Ningxia). The results support the hypothesis that tenure insecurity and limits on renting land act as a significant constraint on migration.

Non-agricultural surplus labour

The studies on labour supply conditions and constraints to migration decisions, which we have surveyed in this section, have focussed exclusively on the agricultural sector (the rural economy). However as discussed in Section 2, a fuller assessment of labour surplus conditions in a Lewisian sense requires a broader economy-wide approach, encompassing unemployment and underemployment in the rest of the economy. There are a number of aspects of the Chinese labour market conditions which call for further research in order to broaden our knowledge of the nature and extent of these ‘non-agricultural’ labour surplus.

First, as already noted there is a notable divide between the urban manufacturing sector and the TVE sector. TVEs employ a large and increasing share of manufacturing workers, and the average wage of TVE workers is less than a half of the average urban manufacturing wage. The tendency for the workers to stay closer to their villages (in TVEs or other firms in the rural areas) at significantly lower wages could be reflective of the constraint imposed by the *hukou* system, land use rights, and also costs of migration (in the form of moving expenses, search costs and so forth). The underlying causes of this locational preference of workers, and the extent to which it results in underutilisation of China’s labour force are an important subject for further research.

Second, so far no attempt has been made to examine surplus labour in the urban economy in the form of underemployment in the SOE sector. The number of SOEs and their total employment have dramatically declined over the past two decades. However, as already noted, over 50 million workers are still employed in SOEs. There is circumstantial evidence that SOEs still shelter a sizeable pool of underemployed workers: the level of employment in SOEs is presumably artificially high and wages in SOEs continued to grow because of ongoing injection of credit through China’s state controlled financial system¹⁵, and therefore voluntary labour mobility out of SOEs remains low, especially in the unskilled brackets (Brandt et al., 2014). As already discussed, at the time when the reform process commenced,

there was a sizeable informal sector in the urban economy, which was subsequently swelled by the SOE reforms. So far no attempt has been made to examine the degree to which the informal sector has been integrated in the formal economy in the process of China's economic transition.

Third, another unexplored issue is the coexistence of 'reported' labour scarcity and urban unemployment. The official (registered) urban unemployment rate of China, which remained within the narrow margin of 2.3 to 2.6 per cent in the 1990s, has varied in the range of 3.3 to 3.8 over the past ten years (which amounted 6.5 million to 7.6 million unemployed workers). According to the province-level data, unemployment rates in the major labour sending provinces have generally continued to remain higher compared to those in labour receiving provinces (Table 2). It is also important to note that there are strong reasons to believe that the official data understates the level of unemployment for several reasons.¹⁶ The data-reporting system covers only the labour force in the age brackets of sixteen to sixty for men and sixteen to fifty five for women. Also the workers laid-off from SOEs and unemployed migrant workers are not counted as unemployed (Minami & Ma 2014). Moreover, many unemployed people do not have incentives to register themselves at the local employment service agencies because they are not qualified for social security payments, or do not have the required qualifications to find employment through such formal mechanisms (Athukorala, Fukao & Yuan, 2009; Rawski & Xiao, 2001; Rawski, 2003).

Table 2 about here

Finally, in recent years there have been some cases of large manufacturing firms operating in China (for example Foxconn and Hewlett Packard) moving their operations from coastal areas to inland provinces in search of low-cost labour (Reuters 2010, Roberts, Meyer & Tschampa 2012). These cases are consistent with the view that wage increases in the coastal areas simply reflect the existing constraint to labour mobility, rather than the actual depletion of the surplus labour pool in the countryside.

4.3 Income share of labour

As discussed in Section 2, the Lewis model predicts that with constant money wage and an upward-shifting labour demand curve (because of capital accumulation as well as technological progress), the profit share of value added (output) in the modern sector will necessarily rise. In other words, the labour share of output (value added) in the economy

(which Lewis called the ‘product-wage’ ratio) tends to fall in the process of economic modernisation because the capitalists do not have to share with their workers the fruits of output expansion. As the economy approaches the Lewis turning point, sooner or later, wage will be rising faster than output per worker, and hence the profit ratio will begin to fall. Thus, whether the product-wage ratio continues to decline before starting to rise is an indication of ‘the historical validity of the model’ (Lewis, 1972, p. 86). However, this indicator has not been used widely in the empirical applications of the Lewis model to examine labour market adjustment in China or in other countries because of the paucity of required data¹⁷.

In an influential paper on economic transition in China during the first two decades of reforms, Young (2003) has reported Chinese national accounts data relating to the functional distribution of income (GDP). According to these data, the labour share in GDP remained approximately flat during the period 1978-1997. In a recent survey of the Lewis model and its applications in the development literature over the past six decades, Gollin (2014, p. 85) draws on the data reported in Young (2003) to infer that ‘if we take the Lewis model literally, it is not clear that [the Chinese economy] looked like a ‘surplus labour’ economy’.

In Figure 1, we have plotted the labour share in GDP in the Chinese economy during the period 1993 to 2007 constructed from the same data source as in Young. For comparison, the labour share is depicted separately for the entire country and for the major labour-sending and labour-receiving provinces. The time pattern of the labour share in GDP in the 1990s is consistent with what Young observed. But, interestingly, from about 2000 when the reforms process moved on to a high-gear, the patterns are consistent with the Lewisian prediction relating to the functional distribution of income in a labour surplus economy. In 2000, the labour share of GDP was about 50 per cent. It has declined continuously, reaching 40 per cent by 2007. The time patterns of the labour share in labour-sending and labour-receiving provinces are strikingly similar, suggesting the economy-wide nature of surplus-labour conditions.¹⁸

Figure 1 about here

Table 3 about here

Unfortunately, the date series cannot be extended beyond 2007 on a comparable basis because of a major revision to the method of national accounts compilation introduced with effect from 2008. Our computation using the NSO input-output database show an increase in

the labour share in GDP from 41.3 per cent in 2007 to 47.3 per cent in 2010, but still remain well below the levels a decade ago (Table 3).

All in all, the patterns of labour share in GDP in China seem to suggest that economic expansion in China is still underpinned by ample availability of labour, notwithstanding some isolated cases of reported labour scarcity and wage increases in the modern sector. However, these data need to be treated with caution because the degree of elasticity of labour supply is not the sole determinant of the distribution of income between labour and capital. Labour share could also fall because an increase in real wage is more than offset by an increase in labour productivity. If technological change is biased in a labour-saving (slower labour absorption) direction, labour productivity will increase, leading to a decline in the labour share in value added (Reynold 1977; Fei, Ohkawa & Ranis, 1985, Minami 1973).¹⁹ There is also the possibility that employment effects of low wages during the early reallocation process can lead to an increase in the total wage bill and hence an increase in the wage-product ratio (Ranis 2004, 716).

5. CONCLUDING REMARKS

In this paper we have surveyed the literature relating to the debate on whether the early phase of economic transition in China fuelled by surplus labour is coming to an end as predicted by the celebrated Lewis model. If we simply go by the number of studies, the majority is consistent with the highly publicised media view that the economy is rapidly approaching the Lewisian turning point and rising wages of unskilled labour has already become a binding constraint on China's economic expansion. But, simply going by the 'number of votes' for making policy inferences seems hazardous. A number of studies, which have looked at labour supply conditions and institutional constraints on rural-urban labour mobility, have convincingly argued that urban wages trends, revealed by the official data and media reports, have camouflaged constraints on labour mobility and deep structural duality in the Chinese labour market.

Thus, the evidence surveyed in this paper makes a strong case for undertaking further studies to broaden our understanding of the institutional constraints that impact on labour mobility. The few available studies on this facet of the debate have treated institutional constraints in broader terms, without clearly distinguishing them from other natural constraints on labour mobility, such as the inability of workers to adapt to urban living conditions and/or economic costs of migration, and a lack of a supportive migratory network.

Also, there has not been any systematic attempt so far to delineate the constraining effect of *hukou* system from the other institutional constraints, in particular, the land use rights.

It is also important to examine labour market conditions in the spirit of the Lewis model from an economy-wide perspective, paying special attention to labour trapped in the urban informal sector, SOEs, TVEs, going beyond the confines of the rural economy. The debate has so far almost entirely focussed on the labour resources in the rural economy. No attention has been paid to labour surplus in the urban economy. Of particular interest in this regard is the rapid increase in employment in the TVE sector and the persistently huge wage gap between that sector and the officially defined urban manufacturing sector. Prima facie, this TVE-urban divide in terms of employment expansion and wages seem to point institutional barriers to labour mobility within the manufacturing sector.

There is also a room to inform the debate by undertaking an investigation of China's economic and labour market transition from a comparative East Asian perspective. The available evidence suggest that the degree of economic advancement measured by per capita incomes in Taiwan, Korea and Japan were much higher than the current level in China at the time these economies began to experience labour market tightening. Of course, differences in the economic size, labour force and the specific global economic context within which the process of economic transition took place needs to be appropriately taken care of in such a comparative analysis.

Further research along these lines are vital because if labour surplus conditions still prevail but the institutional constraints prevent unskilled workers from moving out of the traditional pursuits into more productive activities in the modern sector, then the policies aimed at steering investment towards capital intensive activities and policies that artificially increase the cost of hiring workers would be counterproductive. Clear-headed policy focus on absorbing the labour surplus is vital for maintaining the growth momentum of the Chinese economy while reducing poverty and maintaining social harmony. In a surplus labour economy, government initiatives for uplifting the benefits of already employed workers, through the employment insurance scheme, retirement pensions and other social security provisions, could be premature. The best social protection that the government can provide to the poor is providing them with opportunities for gainful employment. Greater labour market flexibility and enhancing labour mobility are essential prerequisites for achieving this objective. If the reported labour scarcity in urban areas arises from a structural mismatch between the supply and demand for workers, policies are needed to redress these structural imbalances.

NOTES

- ¹ Data reported in this paper, unless otherwise stated, are sourced from the *China Statistical Yearbook* published by the China National Bureau of Statistics (NBS) for various years.
- ² Through a Google search over the period 2004-2015 we found 473 commentaries in the international media, including a New York Times column by Krugman (2013), on rising wages and labour shortages in China.
- ³ In most applications of the Lewis model in the Chinese surplus-labour debate, the ‘subsistent sector’ has been treated as conterminous with ‘agriculture’. This definition ignores unemployed and underemployed labour in the small-scale non-agricultural and informal sectors, which forms part of the surplus labour reserve (Gollin, 2014).
- ⁴ Lewis’s characterization of the traditional sector entails labour being paid the average product of labour or some function of the average product, with substantial income sharing taking place.
- ⁵ A migrant who has a stable job and residence (including a rental home) is eligible for *hukou* status in small cities while *hukou* status in medium-size cities is open to a person who has worked and lived in the city for three consecutive years.
- ⁶ The private economy now contributes to two-thirds of China’s industrial value added (Lardy 2014).
- ⁷ A semi-governmental organisation under the tight control of the government, as it was during the communist era.
- ⁸ See Yang & Zhong (2013, pp. 640-641) for details.
- ⁹ <http://www.stats.gov.cn/tjsj/ndsj/2013/indexeh.htm>
- ¹⁰ In 2009, the total manufacturing employment was 99.0 million, of which 64.4 million workers worked in TVEs and 34.6 millions in urban enterprises (Banister, 2011).
- ¹¹ These figures are consistent with the official statistics on the geographical spread of migrant workers. According to these statistics, the percentage of migrant workers employed in their original provinces in the total migrant workers increased from 65 per cent in 1998 to 78 per cent in 2011 (Li et al., 2013: 11, Table 2).
- ¹² The Rural-Urban Migration in China and Indonesia (RUMiCI) project covered 5000 urban migrant households, 5000 urban local incumbent households, and 8000 rural households in China. The China survey covered the four largest migrant-destination provinces (that is, Shanghai, Guangdong, Jiangsu and Zhejiang) and five largest migrant-sending provinces (that is, Anhui, Hubei, Sichuan, Chongqing and Henan (for details, see Meng and Manning (2010)).
- ¹³ The one child policy was strictly enforced in many urban areas, but in rural areas having a second or even a third child was allowed if previous births were girls. As more than 70 per cent of the population has rural *hukou*, the one-child policy presumably contributed to an increase in the share of rural population in the total population.
- ¹⁴ The survey was conducted by the Chinese Academy of Social Sciences. The 2002 survey covered 6,835 households and 20,632 individuals; while the 2007 survey covered 9,200 households and 37,969 individuals.
- ¹⁵ Much of the increased savings ended up in China’s state-run banks, which in turn recycled them to state-links firms.

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- ¹⁶ Minami and Ma (2014) estimated the urban unemployment rate for 2008 by combining population census data with NBS data and arrive at a figure of 8.6 per cent; the official figure for that year was 3.8 per cent.
- ¹⁷ For applications of this indicator in analysing labour market transition in Japan and South Korea see Minami (2014) and Kim (2014) respectively.
- ¹⁸ Minami and Ma (2014) have estimated labour share in Chinese manufacturing, disaggregated into state-owned enterprises and non-state-owned enterprises over the period 1976-2008. The time path of the data series for non-state owned enterprise is strikingly similar to the economy-wide patterns depicted in Figure 1.
- ¹⁹ $WPR = W \times L / P \times Q = W/P \times L/Q$, where WPR = wage-product ratio, W = nominal wage, L = size of the labour force, Q = real output (measured in value added), P = output price, and L/Q is the reciprocal of labour productivity. WPR could fall because an increase in W/P is more than offset by a decline in L/Q (increase in labour productivity).

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Table 1: Manufacturing employment and wages in China

(a) Manufacturing employment (million workers)			
	Total	Urban	Rural (TVEs)
2002	85.9	30.3	55.6
2003	86.4	29.8	56.5
2004	88.6	30.2	58.4
2005	92.0	31.3	60.7
2006	94.9	32.8	62.1
2007	96.9	34.1	62.8
2008	98.5	34.5	64.0
2009	99.0	34.6	64.4
(b) Average hourly compensation cost of employees, US dollar			
	Total	Urban	Rural (TVEs)
2002	0.6	0.95	0.41
2003	0.68	1.09	0.46
2004	0.74	1.23	0.51
2005	0.83	1.35	0.57
2006	0.95	1.56	0.64
2007	1.21	1.96	0.8
2008	1.59	2.58	1.06
2009	1.74	2.85	1.15
2010	2.02	3.25	1.36
2011	2.40	3.83	1.53

Source: U.S. Bureau of Labour Statistics, <http://www.bls.gov/fls/china.htm#manufacturing>
 (For details on the method of data compilation and adjustments, see Banister (2011))

Table 2: China Registered Unemployment Rate (%)

	1990	2005	2009	2010	2011	2012	2013
National average	2.9	3.8	3.7	3.6	3.5	3.3	3.3
Main Labour receiving provinces	2.3	3.3	3.3	3.2	2.9	2.8	2.9
Beijing	0.4	2.1	1.4	1.4	1.4	1.3	1.2
Fujian	2.6	4.0	3.9	3.8	3.7	3.6	3.6
Guangdong	2.2	2.6	2.6	2.5	2.5	2.5	2.4
Guangxi	3.9	4.2	3.7	3.7	3.5	3.4	3.3
Hainan	3.0	3.6	3.5	3.0	1.7	2.0	2.2
Jiangsu	2.4	3.5	3.4	3.3	3.0	3.0	3.2
Shanghai	1.5	2.1	4.3	4.4	3.5	3.1	4.0
Tianjin	2.7	3.7	3.6	3.6	3.6	3.6	3.6
Zhejiang	2.2	3.7	3.3	3.2	3.1	3.0	3.0
Main Labour sending provinces	3.3	4.2	3.9	3.8	3.8	3.6	3.6
Anhui	2.8	4.4	3.9	3.7	3.7	3.7	3.4
Liaoning	2.2	5.6	3.9	3.6	3.7	3.6	3.4
Jilin	1.9	4.2	4.0	3.8	3.7	3.7	3.7
Heilongjiang	2.2	4.4	4.3	4.3	4.1	4.2	4.4
Shandong	3.2	3.3	3.4	3.4	3.4	3.3	3.2
Sichuan	3.7	4.6	4.3	4.1	4.2	4.0	4.1
Henan	3.3	3.5	3.5	3.4	3.4	3.1	3.1
Hubei	1.7	4.3	4.2	4.2	4.1	3.8	3.5
Hunan	2.7	4.3	4.1	4.2	4.2	4.2	4.2
Gansu	4.9	3.3	3.3	3.2	3.1	2.7	2.3
Guizhou	4.1	4.2	3.8	3.6	3.6	3.3	3.3
Yunnan	2.5	4.2	4.3	4.2	4.1	4.0	4.0
Xinjiang	3.0	3.9	3.8	3.2	3.2	3.4	3.4
Qinghia	5.6	3.9	3.8	3.8	3.8	3.4	3.3
Ningxia	5.4	4.5	4.4	4.4	4.4	4.2	4.1

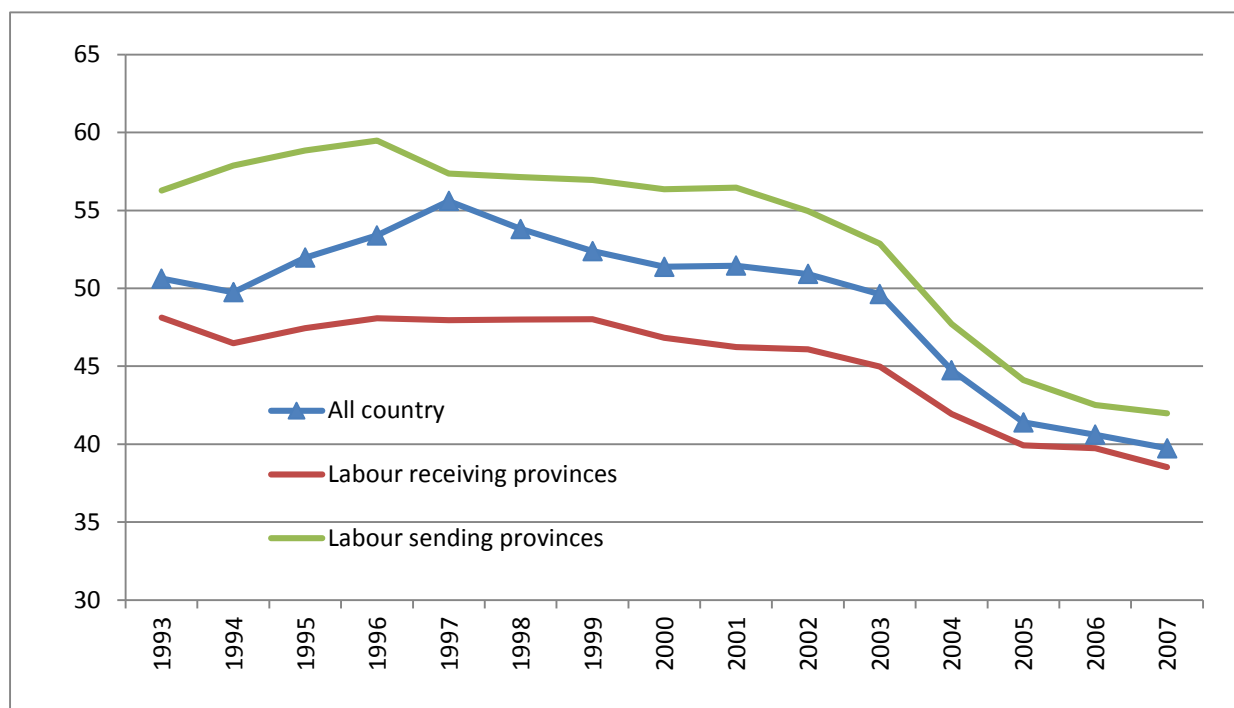
Source: Compiled from NBS, Statistical Yearbook (various issues)

Table 3: Labour share in Income (value added) (%)

	Manufacturing	Economy-wide
1995	27.58	57.89
1997	38.56	54.87
2000	41.28	54.06
2002	37.04	48.38
2005	30.75	41.73
2007	33.00	41.36
2010	37.23	47.32

Source: Compiled from the NSB input-output database,
<http://www.stats.gov.cn/tjsj/ndsj/2013/indexeh.htm>

Figure 1: China: Labour share in national income (%), 1993-2007



Note: Labour-receiving provinces Beijing, Fujian, Guangdong, Guangxi, Hainan, Tianjin, Shanghai, Jiangsu, Zhejiang ; labour-sending provinces: Anhui, Liaoning, Jilin, Heilongjiang, Shandong, Sichuan, Henan, Hubei, Hunan, Yunnan, Tibet, Gansu, Qinghai, Ningxia, and Xinjiang.

Source: Based on data compiled from the NBS Statistical Yearbooks (various years).

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