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Present and Future of the Chinese Labour Market

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Present and Future of the Chinese Labour Market

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Abstract

The paper aims to provide a representation, as rich and complete as possible, of the Chinese labour market, both in terms of stock and flow, despite the fact that the statistical information is still rather poor and often inconsistent. It does then document the increasing differences in the level and trends of the main labour market variables at the provincial level.

In order to reach a deeper comprehension of the dynamic of the Chinese labour market, the paper analyses two other extremely relevant phenomena: the so called "floating population" and the labour shortages that are more and more frequently affecting the coastal regions. After having provided a demographic background to the Lewis model of development with unlimited supply of labour, the paper shows in which periods China has been obliged to accumulate a large labour surplus, mainly in the agricultural sector, and in which periods and through which mechanisms, including ageing and internal migration, the process of de-accumulation has taken place. More specifically, the paper shows how up to now internal migrations have provided urban areas and coastal regions with an unlimited supply of labour, a factor that has played a major role in boosting the Chinese economic development and determining its typology. In order to reach this result, simple demographic tools have been utilized to estimate the net migration balance of each province and in each province of rural and urban areas, and therefore to define areas of departures and areas of arrival, information not provided by the literature on the floating population. Finally the paper provides a rough estimate of the disguised unemployment in agriculture and of its geographical distribution. After assessing which percentage can represent a possible supply of labour for the modern sector, it will be maintained that China not only is very close to the Lewis turning point (a situation that has already been reached in many coastal areas), but is going to become the world biggest importer of labour.

In order to provide its population with living standards comparable to that of the western world, in a reasonable time interval, China needs to continue to grow at an extremely high rate. This will require the capacity to deal with a series of structural problems. Limiting our concerns to the labour market, that is characterized by increasing complexity and regional differentiation, high priority should be given to improve the collection, analysis and dissemination of labour market data; to abolish the one child policy that is totally obsolete in a situation that will be soon characterized by a structural lack of labour supply; to give to the Chinese citizens the right to freely move and change residence, while rapidly regularizing the existing floating population; to raise the legal age of retirement; to plan and implement a structure of t entries in vocational courses and higher educational paths coherent with the expected structure of the labour demand in terms of flows by occupation; to strengthen the Employment service system in order to improve skills matching at the local level, and facilitate the correct allocation of human resources over the national territory, in order to minimize the human and economic costs of future unavoidable internal migrations.

Keywords: China; labour market; stock and flow; demography; internal migration; Lewis turning point.

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The bird must not be held tightly in the hand or it will die. It should fly, but only within the cage; without the cage it will just fly away. If the bird is a market economy, then the cage is state planning. Naturally the size of the cage has to be appropriate.

Chen Yun, 1995

1. Introduction

Very few papers have been devoted to explore the structure and evolution of the Chinese labour market[1]. Moreover, to our knowledge, the approach has generally been global and analyses of regional differences and peculiarities are almost totally lacking. This is particularly striking when we consider that 3 of the 31 provinces and municipalities that compose China have more than 90 million inhabitants[2], 7 between 50 and 90 and 9 between 30 and 50. Together with the fact that up to very recently[3] labour was not viewed as a problem, this situation is partially justified by the lack of suitable and reliable data.

In China the system of labour market data collection[4] has changed through time to adapt to the passage from a command economy to a market based economy. In a first phase, the collection of statistical information was based on administrative procedures and records[5]. The introduction of a market based economy provoked, on one hand, the appearance of identifiable unemployment and, on the other, made increasingly difficult to maintain an up to-date list of employers, while the growing private sector was progressively reducing the economic and statistical relevance of the data of the employed in the public sector.

To face the first problem, starting at the end of the '70s, the Ministry of Labour and Social Security began to collect information on the unemployed registered at the Job Centers. The number of registered unemployed is, however, historically lower than what we would obtain using the ILO definition due to the limited number of categories allowed to register and to the lack of financial incentives for first job seekers, particularly the young people entering the labour market for the first time.

The awareness that in a market based economy only sample surveys, and more specifically household-based surveys, can provide a correct measure of the main labour market variables brought the Chinese authorities, starting in 1994, to collect some basic labour market information adding a few questions to the Annual Population Survey[6]. Given the limits[7] of this approach, a specific Labour Force Survey was introduced in 1997. In a first phase the LFS covered only urban areas[8]; starting in 2001[9] it has been extended also to rural

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[1] The literature on Chinese labour market has confronted mainly three problems: the so-called floating population, the Lewis turning point and the demographic window.

[2] Germany, the largest EU country, has 82 million inhabitants; Guangdong the largest Chinese province has almost 100.

[3] The first signs of labour shortages have been signaled in 2004.

[4] For a more detailed analysis, see Laux Richard, Barry Werner, Ian Knight and Kari Djerf, 2003.

[5] The main source of labour market statistics was represented by the Establishment reporting system that had been designed in order to monitor the planned economy; the Ministry of Agriculture collected supplementary information on employment in township enterprises, and the State Administration for Commerce and Industry collected employment data in private enterprises.

[6] The Annual Population Survey has been carried on annual basis, apart from Census years, since 1982. It is based on a sample of around 1.2 million people (0.1 per cent of the population) covering both urban and rural areas.

[7] They main limits were related to sample that had been designed to monitor population growth and did not take into consideration the specific requisites of surveying employment.

[8] The sample that included 0.4 million people was obtained re-interviewing the people included in the previous October's Population Survey. The results of these Surveys have not been published.

[9] The activation of the National Labour Survey was fostered by a labour force development program funded by the European Commission that lasted between 1998 and 2002 and was run by the British Office for National Statistics (ONS) and Statistics Finland.

areas and now represents the main source of labour market information.

However, both the Labour Force Survey and the Survey on Population Changes provide only a very rough image of the main demographic and labour market variables: absolute values are published only for the largest aggregates and are the result of "adjustments", the provincial values do not sum up to the total and what is in general available are percentage compositions.

Given our goals and the available statistical information, our analysis has required a consistent amount of data homogenization[10] and reconstruction that has often bordered with creative statistics. We have tried to follow standard and homogeneous procedures throughout the paper, and we are convinced that in so doing we have been able to derive valuable information and provide sufficiently reliable indications on the level, structure and trends of the main labour market variables. However, we are also well aware that, given the numerous inconsistencies that have emerged analyzing available data, all our conclusions must be taken with extreme caution. It is our hope that in showing both the limits and potentialities of Chinese labour market statistics we are contributing to show the need for improving data collection procedures and raise the interest in the analysis of the Chinese labour market, in a phase in which the availability of human resources is becoming a central issue.

Starting in 2004[11], a few coastal areas have begun to periodically register labour shortages and more recently this has concurred to determine unprecedented phenomena of labour unrest[12]. This has brought some Chinese scholars to sustain that the Chinese economy is approaching the so called Lewis Turning Point (LTP), i.e. the situation in which the labour supply is no more unlimited and labour demand is faced by an upward sloping supply curve.

The paper will strive to provide a quantitative representation of the main labour market variables, documenting the fact that an analysis of the Chinese labour market at the national level is not only insufficient, but can be misleading since territorial differences in the endowments of physical and human resources and an unbalanced process of economic growth are provoking an increasing differential in the level and trends of the main labour market indicators.

The paper is structured as follows. In a first section we provide a demographic background to the Lewis model of development with unlimited supply of labour[13] on the basis of the standard demographic transition theory. We will point out that the so-called demographic transition does not affect only Total Population (TP), but also, and more importantly from a labour market perspective, the Population in Working Age (WAP). Chinese demographic and labour market data will be used to exemplify this phenomenon, while allowing to determining the phases of labour accumulation and de-accumulation experienced by China and the connection of the de-accumulation phase with internal migrations, the topic to which we will devote the following section of the paper.

In the last twenty years China has witnessed the largest migration phenomenon in human history[14] that dwarfs not only the international migrations experienced by United States and Australia after WW2 and more recently by Europe, but also the great migration of the XIX century. Up to now this phenomenon has been discussed under the euphemistic

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[10] It must also be acknowledged that a Labour Force Survey has to confront a series of peculiarities of the Chinese labour market that make sampling especially difficult (floating population, workers' hostels), while timing of the survey field work must take in consideration not only weather problems but also vacation and reporting habits.

[11] Cai Fang (2008a) and (2008b), Cai Fang and Wang Meyan (2010),

[12] Research by the School of Labor and Human Resources of Renmin University shows that the number of labor-management disputes (i.e. labor-management confrontations involving more than 10 workers who have the same demands) keeps rising in tandem with China's economic expansion. In 1996, about 60,000 such disputes were reported in China. By 2007, however, the figure has risen to about 400,000 and shot up further to about 700,000 in 2008.

[13] W.A. Lewis, 1954

[14] This is underlined also in the introduction of the 2010 Report on China's Migrant Population Development (p. 1) published by the Department of Services and Management of Migrant population of National Population and Family Planning Commission of China.

heading of floating population, that fails to capture the fact that what is taking place is a massive and definitive exodus of hundreds of million of people from poor areas, characterized by an excess of labour supply, to coastal areas where an unlimited supply of labour has played a major role in creating what has been called the factory of the world. We will first review the main quantitative results of the literature on the floating population and discuss its main shortcomings. We will then use simple demographic tools to estimate net migration balances between rural and urban areas and between provinces, information not provided by the literature on the floating population.

The third section of the paper provides a quantitative analysis of the Chinese labour market, paying special attention to the period 2003-2008. The analysis is articulated into two parts. The first considers the national level from an urban–rural perspective. The analysis in terms of stock is followed by an analysis based on generational flows. The process of urbanization that is affecting numerous rural areas, while factories are more and more localized outside cities and towns borders, is making the urban-rural divide progressively less meaningful. At the same time interprovincial differences are growing. The second part will, therefore, be devoted to provide a tentative characterization of the provincial labour markets. Keeping in mind that many Chinese provinces are much bigger than the states that form the European Union, that the economic weight of the more developed provinces is growing at an exceptional rate, and that local labour market issues will assume a growing importance in designing and adopting development policies, it is evident that this line of research is becoming more and more relevant and needed. At the same time, the statistical information presently available is largely insufficient to provide an adequate representation of the provincial labour markets. In this historical phase, characterized by increasing quantitative and qualitative unbalances between labour demand and supply, this should be considered an absolute priority by the Chinese Statistical Bureau.

Numerous papers have already suggested that the unlimited supply of labour that has played such an important role in sustaining a labour intensive economic growth has reached its end, while others have argued that the Chinese agricultural sector is still affected by a large number of disguised unemployed. We will argue that the presence of disguised unemployment represents a necessary but not sufficient condition to guarantee a perfectly elastic supply of labour. Many elements (age structure, educational level, typology of agricultural development, and legislation together with the length of the time horizon considered) concur in determining whether the excess of labour present in agriculture and in the informal sector, both in urban and rural areas, can provide additional supply for the modern sectors. Working in this direction, we will try providing a rough estimate of disguised unemployment in agriculture and we will then analyze its geographical distribution. Finally, we will try to assess which percentage of this disguised unemployment can represent a possible component of the supply of labour for the modern sector. Finally we will maintain, also on the basis of demographic and labour market scenarios, that China not only is very close to the Lewis turning point (that has already certainly be reached in many coastal areas), but that China is going to become not only the biggest economy in the world, but also the biggest importer of labour.

After briefly summarizing the main results emerged from our analysis, we will discuss their implication in terms of policies, paying special attention to labour market issues. We will suggest that the present situation of the Chinese labour market, seen in the context of the expected demographic evolution of the country, requires that high priority should be given to improve the collection, analysis and dissemination of labour market data, the regularization of internal migrants, the abolition of the one child policy, to raise the legal age of retirement.

2. A revisit of Lewis model: unlimited supply of labour and demographic transition.

In his 1954 seminal paper on development with unlimited supply of labour, Lewis starts from the assumption that many underdeveloped countries are characterized by a situation “where population is so large relatively to capital and natural resources, that there

are large sectors of the economy where the marginal productivity of labour is negligible, zero or even negative"[15]. According to Lewis, disguised unemployment of unskilled labour is present not only in agriculture, but also in other sectors, such as domestic services and petty retail trading. In this situation, while there is no interest in raising the productivity of the subsistence sector, the capitalist sector can expand paying wages slightly above the subsistence level, as long as it can take advantage of the excess supply of labour in the subsistence sector.

Lewis analysis did not pay much attention to the problem of how the unlimited supply of labour does come into existence, nor did he consider the impact of demographic trends and of the passage of time on the de-accumulation of the labour surplus. In fact, he only observed that surplus labour can be increased by demographic growth, while it can be exhausted also if population is growing, given an investment rate high enough to allow for an expansion of employment larger than the increase in labour supply[16].

The lack of attention to demographic dynamics is totally justified since at the time the article was written nobody could have suspected that the so called demographic transition - that had already affected Europe for long time, but was in a stage in which demographic growth was taking place at a slow, but positive rate- would enter a phase in which the fertility rates of developed countries would rapidly drop below the replacement level and that numerous at the time undeveloped countries would go through the demographic transition at a much more faster pace than developed countries.

From our vantage point, we can now integrate Lewis analysis with a demographic background that takes into consideration the demographic transformation that is by now affecting all the countries in the world and has been particularly fast in China. This will allow understanding the origin of the labour surplus, considering all the possible causes of its de-accumulation and their relative role in the final stages of the process, and analyzing the situation that can arise after the Lewis turning point has been reached.

The demographic transition was originally described as the transition from a traditional demographic regime, characterized by high fertility and mortality rates, to a modern regime characterized by low fertility and mortality rates: in substance, as the passage from a traditional demographic equilibrium to a modern demographic equilibrium[17]. It is by now evident that, for a long time to come, the demographic *revolution*[18] that has been affecting, although with different intensity and timing, all the countries of the world will provoke negative natural balances, in many instances of considerable size[19].

Up to now the interest of demographers and economists has been concentrated mainly on the consequences of the demographic transition of the Total Population (TP); from a labour market perspective, it is at least equally important to underline that the so-called demographic transition implies an analogous transition of Working Age Population (WAP).

The speed of economic growth and social development coupled with the adoption of the "one child policy"[20], have pushed China trough both demographic transitions at an extremely fast speed. China represents, therefore, a perfect case study to exemplify our thesis.

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[15] W.A. Lewis, 1954.
[16] Ibidem
[17] Chesnais J.C., 1986.
[18] Since the decline in fertility has not stopped around the mark of 2.1 children per woman, that would assure stability in the level of total population, and for the moment such a result is not foreseeable for any economy, the concept of transition, that implies a passage from one situation of equilibrium to another situation of equilibrium, does not apply. It seems therefore more appropriate to speak of demographic transformation or revolution; however in order to avoid misunderstanding we will continue to use the terminology of demographic transition.
[19] For a discussion of this issue and its consequences for international migration see M. Bruni, 2009.
[20] China has experienced a dramatic decline in fertility, the TFR having plunged from a value of more than 6 children per woman at the beginning of the '50s to a present value estimated between 1.74 and 1.77. The role of the "one child policy" -according to Wang Feng (2005) "the largest and most extreme social experiment in population growth control via government intervention in human reproduction in world history"- on the decline of fertility and on the Chinese society as a whole is a debated issue. On one hand, the Chinese government underlines that: "China has accomplished a historic transition in population reproduction pattern from one featuring high birth rate, low death rate and high growth rate to one featuring low birth rate, low death rate and low growth rate in a

The following graphs, based on elaborations of data published by the Population Division of the United Nations[21], summarize the main demographic tendencies that have affected China since around 1950 and are expected to prevail in the next forty years[22]. They represent, respectively:

- The yearly average number of births and deaths and the Natural balance of TP (graph 1);
- The yearly number of entries into and exits from WAP and the WAP Natural balance (graph 2).

In both cases we can distinguish three consecutive phases. In the first, the Natural balance progressively increases; in the second, the Natural balance progressively declines and reaches a value of zero; in the third, the Natural balance is negative, and presents increasing absolute values. Therefore, in the first phase, TP and WAP increase at an increasing rate; in the second, they increase at a declining rate; in the third, they decline. Some notable differences between the transition of TP and WAP must however be underlined, and the Chinese case well exemplifies them.

In the first phase of the TP transition, the increase in the Natural balance is provoked by a parallel decline in deaths and increase in births, the first phenomenon playing the major role. In China this phase lasted until 1970. Analogously, the increase in WAP Natural balance

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relatively short period of time, a change that took decades or even up to a hundred years for developed countries to realize in the past" (Information Office of the State Council of the People's Republic of China, 2000); on the other, the literature points out a series of costs that the country has paid for the one-child policy: a growing proportion of elderly with inadequate government or family support, a disproportionately high number of male births attributable to sex selective abortion, increased female infant and child mortality rates, the collapse of a credible government birth reporting system, the violations of human rights, the forceful alteration of China's traditional family structure (Wang Feng, 2005).

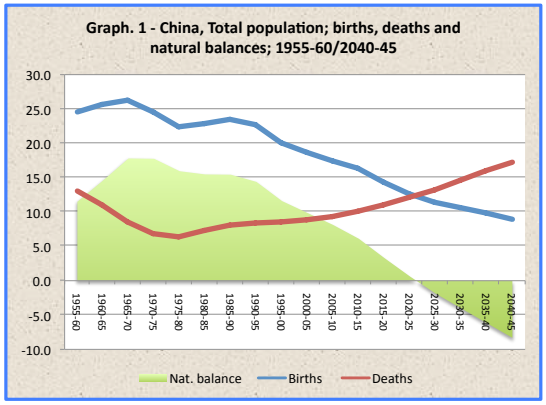
The one-child policy was the end results of previous family planning measures. In 1953 the Chinese government started to provide family planning services as a contribution to maternal and child health. In 1970, the fourth five-year plan included, for the first time, targets for population growth rate. Contraceptive and abortion services were then extended to the rural areas, and there was extensive promotion of later marriage, longer intervals between births, and smaller families, the so-called "later, longer, fewer" policy. Judging from the results, these earlier intervention were rather successful so that by around 1980 the TFR had dropped to 2.7. However the result was considered not sufficient to ensure socio-economic development and the one-child policy was approved and implemented at the beginning of the '80s. During the first ten year, the period in which the one child policy was more harshly implemented, the TFR remained substantially stable. We must however remember that in 1980 China reduced the legal age for marriage and in 1984 in some areas couples were allowed to have two children, both measures being followed by an increase in fertility. It was in the following 20 years that the TFR registered a dramatic decline falling below replacement level. In this period the homogeneity of the one-child policy was abandoned in favor of an extremely articulated and diversified approach so that the one child policy, evolved in to a multi-policy regime. Moreover, starting at the end of the 1990's, China shifted the focus of its birth control program away from administrative coercion toward encouraging voluntary contraception and providing couples with a wider selection of contraceptive methods. Moreover, starting at the end of the 1990's, China shifted the focus of its birth control program away from administrative coercion toward encouraging voluntary contraception and providing couples with a wider selection of contraceptive methods. During the same period China was affected by all the phenomena that are normally associated with declines in fertility: the employment level in agriculture sharply fell, while the percentage of urban population rapidly expanded and the level of educational attainment and the average standard of living increased. It is, therefore, extremely difficult to evaluate in which measure the decline in fertility has been due to population planning and in which measure to socio-economic-development; even more difficult to evaluate the impact of abolishing the one child policy. A series of element do however support the idea that Chinese observers have been largely overestimated the specific impact of the one child policy. In the first place the progressive articulation of the one child policy has brought to what is in fact a 1.5 child policy. In the second place the rate of fertility is not homogeneous over the territory. According to Chinese data, the TFR is 1.4 in urban areas and 1.92 in rural areas and this suggests that environmental factors play an important role and that the process of urbanization could play a major role in reducing fertility. It could also be argued that the introduction of the one-child policy has contributed to progressively transform the attitude of the young couples bringing them to feel that having only one child is a logical way to cope with the growing lack of family support and to better provide to their children.

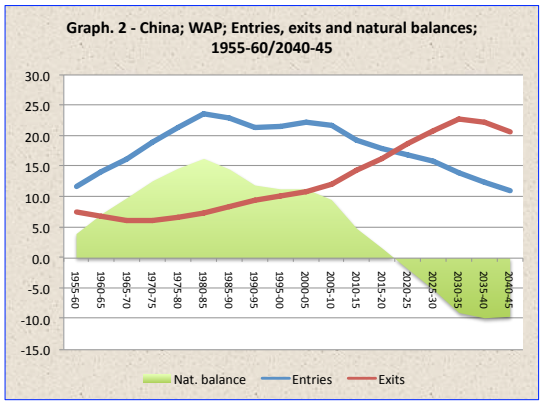
[21] Population Division, 2009.

[22] The data in Graph. 1 are three year moving averages of the data published by the Population Division in its 2008 Revision of the Highlights of the World Population Prospects; the data in Graph 2 are three five year periods moving averages of our elaborations based on data published by the same source; Population Division, 2009.

was caused by a contemporary increase in entries and decline in exits. In this case, however, the major role was played by entries. Moreover, the Natural balance of WAP peaks with a delay of 15 years with respect to that of TP, a time span that corresponds to the number of cohorts of the first main age group (0-14).

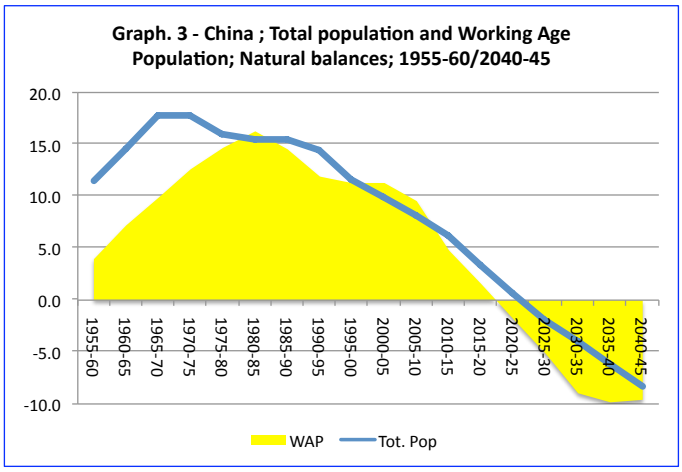
In the second phase, the decline in the Natural balance of TP is determined by a parallel decline in births and increase in deaths. According to the Population Division of the United Nations, in China this phase is expected to last around 55 year and end in 2025. The decline in the Natural balance of WAP, provoked mainly by an increase in exits, but also, after the beginning of the century, by a fast decline in entries proceeds at a much faster pace, due to the lower impact of ageing in this segment of the population. According to the same source, this phase is expected to last 35 years and end around 2020.





The existence of the third phase, in which both WAP and TP will progressively decline was not forecasted until very recently[23], while different assessments have been made of the demographic, economic and labour market implications of this phenomenon. The prevailing opinion is that WAP and TP will in fact decline with negative consequences on the level of labour force, employment and production. Another possibility, already sustained by one of the author[24] is that the decline in WAP will provoke a structural lack of labour supply that will induce migration flows sufficient to determine an increase both in WAP and TP, also through a positive impact on fertility.

Graph 3 represents together the natural balance of TP and WAP allowing to compare the timing, duration and amplitude of the three main phases of the two "transitions".



[23] As suggested also by the terminology adopted, one of the basic assumptions of the theory of the demographic transition was that the decline in the fertility rate would have leveled off at the replacement value of around 2.1 children per woman.

[24] M. Bruni, 2009 and for what relates to China M. Bruni, 2010

The demographic transition does normally start in a traditional economic setting, still largely dominated by the agriculture sector. The process of capital accumulation has yet to start while the Replacement demand[25] of the modern sector is still very small due to its employment size and age structure. The potentiality of the extra-agricultural sectors to absorb larger and larger waves of young people reaching working age is, therefore, extremely limited and the great majority of young people entering working age are "accumulated" in the agricultural sector.

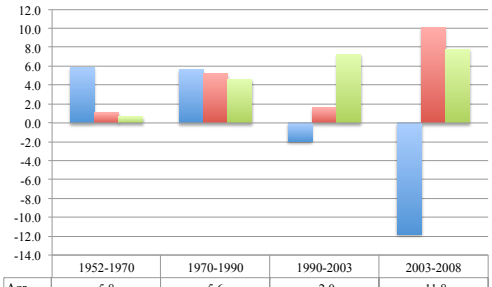
In China, in 1952, agricultural employment represented 83.5 per cent of total employment and in 1970 it was still around 80 per cent. In this period, total population grew on the average by 14.2 million per year, rural population by 10.1 million. Given the very young age structure of the Chinese Population, WAP grew on the average by "only" 7 million, less of the combined average growth in agricultural employment (5.8 million), and in modern sectors' employment (1.8 million). This result is explained by the fact that all rural population was considered "employed".

Tab. 1 - Population and employment; yearly average increase in selected periods; million; 1952 - 2008

	Urban Pop	Rural Pop	Total Pop.	Total Empl.	Urban Empl	Rural Empl.	Agr.	Ind.	Services
1952-1970	4.0	10.1	14.2	7.6	2.1	5.5	5.8	1.1	0.7
1970-1990	7.9	7.8	15.7	15.2	5.4	9.8	5.6	5.2	4.6
1990-2003	17.1	-5.6	11.5	7.4	6.6	0.8	-2.0	1.6	7.3
2003-2008	16.6	-9.4	7.2	6.1	9.1	-3.0	-11.8	10.1	7.8

The next 20 years witnessed the beginning of China's drive toward modernization, with employment in the industrial sectors growing on the average by 5.2 million per year, and employment in services by 4.6 million. Agriculture continued to absorb a predominant portion of the new entrants in working age that numbered more than 21 million per year. We can, in fact, estimate that the yearly average value of the Replacement demand of the agricultural sector must have been equal to at least 6 million. Given an Additional demand in excess of 5 million, the total number of first time entrants in the sector can be estimated at around 12 million per year.

Graph. 4 - China; Total employment by sector; average yearly growth in selected periods; 1952-2008



	1952-1970	1970-1990	1990-2003	2003-2008
Agr.	5.8	5.6	-2.0	-11.8
Ind.	1.1	5.2	1.6	10.1
Sercices	0.7	4.6	7.3	7.8

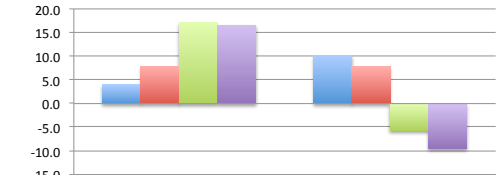
Graph. 5 - China; Urban and rural employment; average yearly growth in selected periods; 1952-2008

	Urban Empl	Rural Empl.
1952-1970	2.1	5.5
1970-1990	5.4	9.8
1990-2003	6.6	0.8
2003-2008	9.1	-3.0

In 1991, agricultural employment peaked at around 390 million, 60 per cent of total employment, while rural population was close to the maximum value of 859 million that will be reached in 1995. So, by around 1990, the phase of excess labour accumulation in the subsistence sector is finished and the stage is set for the de-accumulation phase.

[25] Replacement demand measure the number of young people that can enter employment for the first time to replace the workers that have definitely left the area of employment because of ageing, death or migration. The stock-flow model from which this concept is derived will be briefly discussed further in the paper. For a more detailed presentation seed M. Bruni 1988 and 2009.

Graph. 6 - China; Urban and rural population; average yearly growth in selected periods; 1952-2008



	Urban Pop	Rural Pop
1952-1970	4.0	10.1
1970-1990	7.9	7.8
1990-2003	17.1	-5.6
2003-2008	16.6	-9.4

Following an analytical pattern in terms of stock that still now largely hinders the understanding of the mechanisms underlying the functioning of the labour market, Lewis did not discuss the dynamic of the de-accumulation process and relayed only on the growing demand of the modern sector. In fact, numerous other interacting mechanisms and conditions must be considered.

In the first place, in the majority of countries that have historically experienced the presence of an unlimited supply of labour, and China is no exception, the excess of labour supply is largely localized in rural areas, while industrial development tends to be located in urban areas. In the second place, the geographical localization of industrial development does not necessarily give priority to the availability of local labour. This implies that the process through which the modern sector absorbs the excess of labour supply present in the subsistence sector does normally require migration flows not only from rural to urban areas, but more generally to the geographical areas where economic development is taking place and where local labour supply is insufficient. Third, since the process of industrialization spans over a long period of time, ageing can represent a relevant way through which the unlimited supply of labour is progressively exhausted. Finally, it is extremely important to realize the difference between disguised unemployment, i.e. the amount of labour that can be released by the agricultural sector (and the service sector) without reducing the level of production and the supply of labour that can be absorbed over a given time horizon by the modern sector. The difference can be relevant and will clearly emerge when we take into consideration factors such as the educational level and skills of the disguised unemployed, the presence of a drive to modernize the agricultural sector and the age structure of the disguised unemployed.

Starting in 1990, employment in agriculture began to contract and this trend was soon shared by rural population and, in a much more pronounced way, by the rural population in working age. Between 1990 and 2003 the increase in industrial employment has been very modest due to the heavy restructuring of State Owned Enterprises and has been largely exceeded by the growth in the service sector. However, taken together, employment in the two sectors grew, on the average, by around 9 million per year, while the agricultural sector lost two million employed per year.

It must be understood that the fact that a sector's employment declines over a given interval of time does not mean that the sector is not absorbing first job seekers, but that the number of people that have entered the sector is lower than the number of people that have exited it. At the same time, the increase in the employment level of the modern sector underestimates the contribution of the expanding sectors in absorbing first time entrants, whose number is equal to the sum of additional job positions created in the interval and the number of entries necessary to substitute the people that have definitely exited the sector.

Available data do not allow estimating the number of first time entries in each sector in this period. Our educated guess, based on the employment level and age structure of agriculture, is that every year between 1990 and 2003 at least 5 million young people have entered agricultural employment.

However, it is between 2003 and 2008 that the process of de-accumulation of disguised unemployment has taken a decisive turn bringing numerous scholars to suggest that China has

reached the Lewis Turning Point (LTP). Whether this is true or, as other scholars have suggested, the LTP has not been reached and China still enjoys an excess of labour supply is an empirical question we will try to answer in the last part of the paper.

3 China: a country on the move

3.1 The floating population

Our previous discussion has shown that the de-accumulation phase of the excess labour supply does necessarily imply migration flows from the areas where the subsistence sector is concentrated to the areas where the modern sector is developing.

In China the dimension and trend of internal migrations have been studied mainly under the perspective of the so-called floating population (*liudong renkou)*, a concept generated by a system of rigorous residency registration adopted at the end of the '50s[26]. Accordingly, the floating population is composed by those people that have resided at the place of destination for *a given period* without *local* registration status. Therefore, its size depends on the chosen length of the "period" and on the definition of "local": the shorter the period and the smaller the area considered, the bigger the floating population.

In the 1990 Population Census the floating population includes people who have resided at the place of destination for more than one year. Starting with the 2000 Population Census the period is reduced to six months[27]. Moreover, while the 1990 Census allowed measuring only movements inside each province and between provinces, the 2000 Census allows measuring also movements between counties and inside each county. It must also be underlined that the floating population does not include the "migrants" that are defined as those people that have obtained a local registration status in the place of migration.

The terminology "floating population", while capturing a legal aspect of the phenomenon, conveys a wrong image of the internal migration flows that have affected and are affecting China. What China has been experiencing in the last thirty years is not a phenomenon of temporary or seasonal migration, but an exodus of unprecedented dimension of people looking for jobs and for a better future for themselves and for their families, and that in so doing have largely contributed to the Chinese economic miracle, providing an unlimited supply of labour willing to work at a subsistence wage. The more recent literature does therefore clearly speak of migration and labour mobility[28].

Liang and Ma [29] have provided a comprehensive analysis of the trend and characteristics of the floating population up to the year 2000. According to these authors, the inter-county floating population has increased from 7 million in 1978 to 22 million in 1990. It was however during the 90s, and more specifically in the second part of the decade, that internal migration became a mass phenomenon. Not only it reached 79 million by 2000[30], but

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[26] The *Hukou* system -that was enforced in a rigid way until the beginning of the '80s- made internal migration illegal allowing to keep under control cities' and towns' public expenditure in education, health and social welfare. The system has been progressively liberalized, but still the great majority of rural migrants are not entitled to the same rights and benefits that urban citizens enjoy, no matter how long they have lived in the urban setting. They are still penalized by an above average presence in the informal sector, wage discrimination, higher incidence of wage arrears, exclusion from social security sand public services. In more general term, they are more vulnerable. The numerous studies devoted to the Floating populations have allowed Chinese scholars to point out the social and ethic shortcomings of the *Hukou* system that have been recognized not only by Institutions such as the National Population and Family Planning Commission, but also by the Chinese leadership. As stated by Fang, Du and Meiyan (op. cit. p. 12): "The exclusion of migrants from the basic social security system is inconsistent with the overall goals set by the Central Government to equalize social welfare and public services between rural and urban residents." For the moment "the Hukou system, because of its half-baked reforms as regard fundamental issues, still functions as an *invisible wall* that defines the different identities of urban resident and migrant workers from the countryside. And treats migrants differently". Fang, Du and Meyan Wang, p. 7.

[27] Fang Cai, Yang Du and Meyan Wang, 2009

[28] Ibidem,

[29] The size of the floating population was obviously grater considering also intra-county movements. Adopting this definition in 2000 the floating population amounted to 144 million (11.6 per cent). of the total Chinese population) and included 65 million people who had moved inside the county of residence.

[30] Up to 1978 rural migration was strictly prohibited. The first forms of labour mobility appear at the end of the '70s, taking mainly the form of movements to township and village enterprises (TVE), under the policy: "leave the

three quarters of the inter-county "irregular" migration took place between 1995 and 2000. Since in 2000 regular migrants were around 20 million, the total amount of migrants registered by the Census of that year was of around 100 million, i.e. almost 8 per cent of the total Chinese population.

Moreover, it was during the '90s that the phenomenon of long distance migration became predominant. In 1990 out of 21 million migrants, only around 6 million (27.7 per cent) were inter-provincial migrants; by 2000 the number of inter-provincial migrants had grown to 42 million, 53.9 per cent of the total, and 2/3 of the increase in the floating population registered during the period was represented by inter-provincial migrations. The long distance migration was directed mainly to the coastal areas and to the two main metropolitan areas: two third (63% per cent) moved to Guangdong, that accounted for almost one third of the total, Zhejiang (8.3 per cent), Jiangsu (6.6 per cent), Fujian (5.3 per cent), Shanghai (6.7 per cent) and Beijing (4.4 per cent).

The 2000 Demographic Census recorded the presence of "irregular migrants" in all Chinese provinces, but it also showed that the phenomenon was heavily concentrated: the first ten provinces accounted for more than two third of the total and the last ten for a little more than 10 per cent. Guangdong lead the ranking with 21 million, followed at distance by Zhejiang (5.4 million), Jiangsu (5), Shanghai (4.4) and Fujian (3.8) (Table 2).

If we consider the share of the floating population on the provincial population Shanghai ranked first (26.6 per cent), followed by Guangdong (24.7), Beijing (19.2), Zhejiang (11.8), and Fujian (11.2). In thirteen provinces the floating population accounted for less than 4 per cent of the total population.

The weight of long distance migration (interprovincial migration) on total migration ranges from almost 95 per cent in Beijing to a little more than 19 per cent in Anhui. Numerous reasons can account for such a difference in the relative role of urban-rural migration and interprovincial migrations. On one side, the relative importance of rural population. Beijing, Tianjin and Shanghai rank respectively first, second and fourth in the ranking by weight of migrants coming from other provinces, while Hunan, Sichuan and Anhui occupies the last three positions. Another reason is certainly represented by the probability to find a job, and therefore by the speed of economic growth. This does explain the fifth place of Guangdong and the seventh of Zhejiang. Development and political policies of the Central government encouraging migration to the frontier regions can then account for the third place of Xinjiang and the six place of Tibet.

land without leaving the village". In 1984 they were encouraged to work in TVE and in 1988 in nearby small cities, but were not provided with coupons for buying food and other necessities in the local markets. At the same time the Chinese Government formulated policies facilitating rural labour transfers from the Central and Western regions. See Fang Cai, Yang Du and Meyan Wang, op. cit.

Table 2 - Floating population by province; 2000						
		% distr.		% of Prov. Pop.		% of inter-provincial migrants
1	Guangdong	26.7	Shanghai	26.6	Beijing	94.6
2	Zhejiang	6.9	Guangdong	24.7	Tianjin	92.9
3	Jiangsu	6.4	Beijing	19.2	Xinjiang	73.6
4	Shanghai	5.5	Zhejiang	11.8	Shanghai	71.9
5	Fujian	4.8	Fujian	11.2	Guangdong	71.6
6	Sichuan	3.5	Xinjiang	10.4	Tibet	70.9
7	Shandong	3.4	Hainan	8.7	Zhejiang	68.0
8	Beijing	3.3	Tianjin	8.0	Hainan	58.4
9	Yunnan	3.2	Inner Mongolia	7.6	Fujian	56.3
10	Liaoning	2.9	Jiangsu	6.9	Ningxia	52.3
11	Hubei	2.8	Ningxia	6.7	Jiangsu	50.7
12	Hebei	2.7	Qinghai	6.4	Yunnan	46.3
13	Henan	2.6	Yunnan	5.9	Shanxi	45.7
14	Xinjiang	2.4	Tibet	5.8	Chongqing	45.6
15	Guangxi	2.3	Liaoning	5.5	Liaoning	45.3
16	Heilongjiang	2.3	Heilongjiang	5.0	Hebei	43.6
17	Inner Mongolia	2.3	Shanxi	4.5	Shaanxi	40.9
18	Hunan	2.2	Guangxi	4.2	Qinghai	40.3
19	Shanxi	1.9	Hubei	3.8	Shandong	38.4
20	Guizhou	1.6	Guizhou	3.6	Jilin	32.7
21	Anhui	1.5	Jilin	3.5	Guizhou	32.6
22	Shaanxi	1.3	Sichuan	3.3	Gansu	31.8
23	Jiangxi	1.3	Hebei	3.2	Inner Mongolia	30.9
24	Jilin	1.2	Shandong	3.0	Hubei	27.2
25	Chongqing	1.1	Chongqing	2.9	Jiangxi	25.1
26	Tianjin	1.0	Gansu	2.9	Henan	23.7
27	Gansu	0.9	Shaanxi	2.9	Guangxi	23.2
28	Hainan	0.8	Hunan	2.8	Heilongjiang	21.6
29	Ningxia	0.5	Jiangxi	2.5	Hunan	19.7
30	Qinghai	0.4	Henan	2.2	Sichuan	19.5
31	Tibet	0.2	Anhui	2.0	Anhui	19.4
	China	100.0	China	6.3	China	53.9
Source: Zai Liang and Zhongdong Ma, 2004						

A report just published by the National Population and Family Planning Commission puts the floating population at a record value of 211 million in 2009[31]. The report contains data for 2005 similar to those we have just presented (Table 3). Being derived from the 1 per cent Survey run in 2005, they are not strictly comparable with those of the 2000 Census[32], but confirm some of the previous observations, while adding some possible suggestions about the trend of the phenomenon (Table 3).

[31] The Department of Services and Management of Migrant population of National Population and Family Planning Commission of China, 2010

[32] Some notable differences do also emerge between the structure of the floating population in 2000 presented in the Report and those for the same year published by Linag and Ma.

Table 3 - Floating Population by province; 2005

		% distr.		% of Prov. Pop.		% of inter-provincial migrants
1	Guangdong	22.4	Shanghai	34.3	Beijing	97.7
2	Zhejiang	8.5	Guangdong	26.5	Tianjin	96.1
3	Jiangsu	7.6	Beijing	22.6	Shanghai	75.9
4	Fujian	5.8	Zhejiang	20.0	Guangdong	67.0
5	Shandong	4.8	Fujian	19.0	Zhejiang	63.2
6	Shanghai	4.5	Jiangsu	12.9	Xinjiang	49.3
7	Sichuan	3.9	Tianjin	11.8	Tibet	47.5
8	Liaoning	3.3	Liaoning	10.8	Jiangsu	44.0
9	Beijing	3.2	Inner Mongolia	10.7	Fujian	42.2
10	Hunan	3.0	Xinjiang	10.4	Hainan	35.9
11	Hebei	2.9	Hainan	9.8	Hebei	29.7
12	Inner Mongolia	2.7	Qinghai	8.3	Ningxia	29.3
13	Anhui	2.6	Jilin	7.1	Yunnan	27.5
14	Yunnan	2.4	Heilongjiang	7.0	Inner Mongolia	27.5
15	Hubei	2.2	Yunnan	6.6	Qinghai	27.3
16	Heilongjiang	2.2	Shandong	6.4	Liaoning	24.3
17	Henan	2.0	Ningxia	6.2	Shanxi	24.0
18	Jiangxi	2.0	Hubei	5.7	Chongqing	22.9
19	Guangxi	1.9	Hunan	5.6	Shaanxi	21.3
20	Shanxi	1.8	Sichuan	5.6	Shandong	21.3
21	Xinjiang	1.6	Chongqing	5.5	Guizhou	18.8
22	Guizhou	1.6	Jiangxi	5.5	Gansu	18.3
23	Shaanxi	1.5	Guizhou	5.4	Guangxi	15.7
24	Jilin	1.4	Shanxi	5.1	Jilin	15.7
25	Chongqing	1.2	Guangxi	5.0	Heilongjiang	14.7
26	Tianjin	1.1	Anhui	4.9	Hubei	13.9
27	Gansu	0.8	Shaanxi	4.7	Henan	11.9
28	Hainan	0.6	Hebei	4.3	Anhui	11.5
29	Qinghai	0.3	Gansu	3.4	Sichuan	11.0
30	Ningxia	0.3	Tibet	3.2	Jiangxi	10.6
31	Tibet	0.1	Henan	2.5	Hunan	8.9
	Source: Report om China's migrant popultion 2010, based on the 2005 1% Population Survey					

According to the Report, in 2005 the floating population amounted to 147 million people. Its distribution appears as concentrated as in 2000, the first ten provinces accounting almost for 67 per cent and the last ten for 8.8 per cent. Nine of the first ten provinces are the same as in 2000, the only difference being represented by the entry of Hunan and the exit of Yunnan. The Municipalities of Shanghai and Beijing have lost some positions, while the Provinces of Fujian, Shandong and Liaoning have gained some.

The share of floating population has increased in almost all provinces and it is above ten per cent in the ten provinces with the highest values. Together with the Municipalities of Shanghai -where immigrants represent more than one third of the total population- Beijing and Tianjin, we have the costal provinces of Guangdong (26.5 per cent), Zhejiang, Fujian, Jiangsu and Liaoning. In the ninth and tenth position we find Inner Mongolia and Xinjiang, while Hainan ranks 11th with a percentage of 9.8 per cent.

Surprisingly, according to this source, the weight of interprovincial migrants is lower than that estimated by the Census, the only exception being represented by the three municipalities.

The analysis by Liang and Ma contains some results that are of special interest to our analysis. The first relates to the presence and relevance of migrations flows moving toward rural areas. By 2000 more than 1/5 (30 million) of the floating population inclusive of the intra-county migrants had migrated to rural areas, a choice made by 25 per cent of inter-province migrants, 19 per cent of intra-province migrants, and 9 per cent of the intra-county migrants. Liang and Ma suggest two possible main motivations. The first is that peasants in

relatively developed rural areas are engaged in non-agricultural activities and hire migrants to handle farm work. The second is migration for purpose of marriage[33].

They also sustain that the motivations to migrate of the members of the floating population and of the migrants are different. In fact, data seem to suggest that the difference is more of form than substance. For the floating populations the motivations connected to work weight for around 68 per cent and those connected to family reunion for 17 per cent, the former being predominant for people in the central age groups, the latter for the youngest and for the oldest. The main reasons given by migrants are education and marriage. This is not surprising since education and marriage are also the main motivations that allow to obtain a urban residence permit and then live and work in the urban environment. The conclusion is that the final motivation of all migrants is to find a better working condition and young people pursue this goal by moving to urban areas to complete their studies, and so obtain a residence permit.

3.2 Migration balances

The analysis of migration flows in terms of floating population can be seen as a mirror image of the analyses of international migration in terms of visa holders: the first concerns those that, according to Chinese law, are irregular migrants the second only regular migrants.

The estimation of illegal residents in arrival areas has provided an indication of how many people are contravening the residence legislation, but has not allowed to clearly defining areas of departure and areas of arrival and measuring migration balances. As we have seen, and as should be expected, some floating population is in fact present, although with different intensity, in every province.

The following figure provides a representation of the complex patterns of territorial mobility that can affect a country like China composed by many provinces and where each province includes urban and rural areas.

Each province can be affected by movements between urban and rural areas. Although we should expect rural-urban migration flows to be generally prevailing, floating population surveys have shown than consistent movements in the opposite direction are also taking place. Each province can then express emigration flows toward other provinces, while receiving immigrants from other provinces. Both emigration and immigration flows can originate from urban and rural areas and be directed toward urban and rural areas.

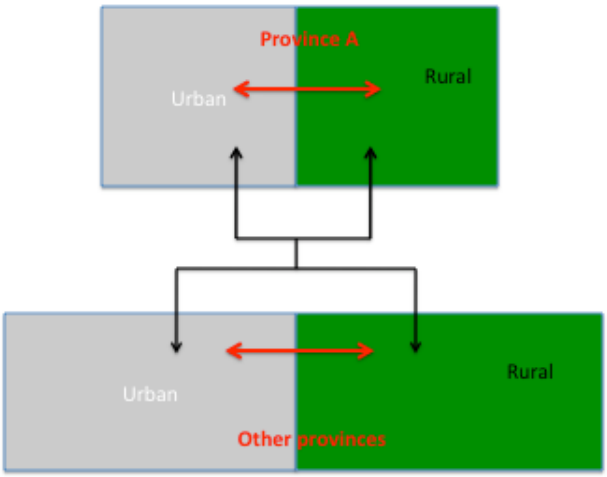
In this paragraph we will use the fundamental demographic identity to estimate total migration balances between rural and urban areas and between provinces, and analyze the complex inter-play of these two types of flows.

Between 1995 (when rural population peaked at almost 860 million) and 2008, China's total population has increased by 117 million, as a result of an increase in urban population by 255 million, and a decline in rural population by 138 million[34] (Table 4). The rate of natural growth is available only for urban areas, while the data on fertility rates do suggest that natural growth is higher in rural than in urban areas. It is therefore safe to assume that rural areas have registered at least the same rate of natural growth as urban areas.

[33] The data published by Liang and Ma allow estimating the migration balance of rural areas only at the intra-county level, but not at the inter and intra provincial level

[34] In percentage terms rural population has declined since 1952 when it accounted for more than 87 per cent of total Chinese population, but the speed of the phenomenon has sharply increased in the last 15 years.

Figure 1 – Patterns of migrations flows



On the basis of this conservative hypothesis, we have estimated the natural growth of urban and rural areas and then their migration balance as the difference between total and natural growth[35]. Our computations show that between 1995 and 2008 at least 217 million rural dwellers have migrated to urban areas (table 4), contributing by 82.5 per cent to the demographic growth of urban population[36].

Between 2003 and 2008, the Chinese population has increased by almost 36 million (+2.8 per cent), as the result of an increase in urban population by 83 million (+15.8 per cent) and a decline in rural population by 47 million (-6.1 per cent). The rural-urban migration balance can, therefore, be estimated in at least 68 million. Our computations do, therefore, suggest that the rural-urban migration balance has declined from an average yearly value of 18.5 million between 1995 and 2003 to 13.7 million between 2003 and 2008.

Table 4 - Urban and rural areas; demographic balances; 1995-2003

	Total Balance		Natural balance		Rural-urban Migr. Bal.		Imm. as % of urban pop. growth
	Urban	Rural	Urban	Rural	Total	Yearly	
1995-2003	172	-91	24	58	-148	-18.5	86.3
2003-2008	83	-47	14	21	-68	-13.7	82.5
1995-2008	255	-138	38	79	-217	-16.7	85.1

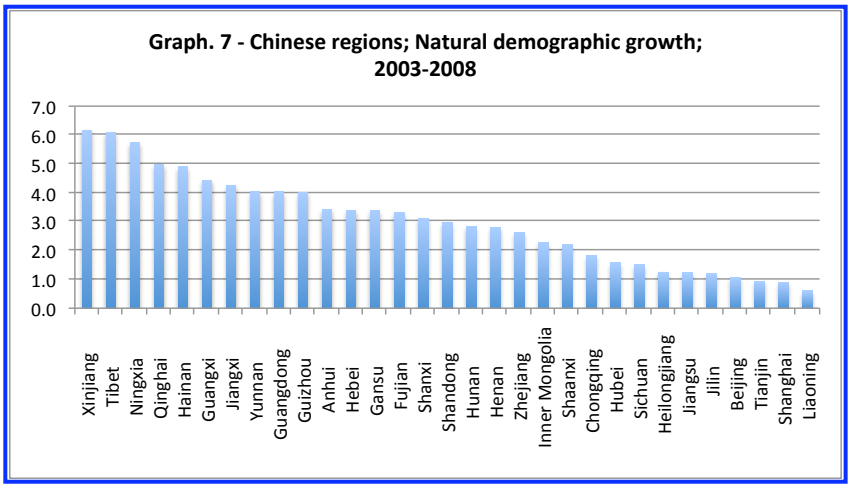
The literature on international migration has clearly shown that the process of rural-urban migration is very often the premise for international migrations. Indications that also in China migration to urban areas can represent the premise for longer distance migrations have emerged from the floating population literature. In order to obtain a more detailed picture of Chinese migration patterns, we have therefore estimated for each province the urban-rural migration balance and the inter-provincial migration balance.

All Chinese provinces have been affected by the demographic transition, but provincial birth and mortality rates, and, therefore, provincial rates of natural growth, still greatly differ. Between 2003 and 2008, natural growth has been positive in all provinces, but natural growth rates range between values above 6 per cent in Xinjiang and Tibet, and values around or

[35] What we are doing is to apply the basic demographic identity that TP at time *t* is equal to TP at time *t-1* plus the Natural Balance (NB) and the Migration Balance (MB) between *t* and *t-1*. Therefore
MB = Delta TP - NB

[36] According to Cai Fang and Wang Meiyan, 2010; "the increment of urban working age population has mainly come from in-migration of rural labor force in the recent years, and it is predicted that in about 2015, the amount of out-migrated working age population in rural area will be larger than the increase in working age population in urban area."

below 1 per cent, in the municipalities of Beijing, Tianjin and Shanghai, and in the Province of Liaoning (Graph 7). This shows that the Chinese provinces are largely spread along the path of the demographic transitions.



Moreover, in the same period, total population has increased in 23 provinces (+52.5 million) and declined in 8 (-17 million). Guangdong accounts for 47 per cent of the growth registered by the Chinese Population and for 32 per cent of the positive demographic balances at provincial level. The demographic growth of the first eight provinces by population growth (Guangdong, Zhejiang, Jiangsu, Liaoning, Shandong, Beijing, Tianjin and Shanghai) has been higher than the total growth in Chinese population and accounts for 70 per cent of the sum of the provincial positive balances. The demographic decline has been concentrated in Sichuan, Anhui, Henan and Hunan. In substance migrations flows have played a major role in redistributing natural demographic growth over the Chinese territory.

Applying the methodology previously suggested, we reach, in fact, the conclusion that 30 million people have moved from 11 provinces of emigration (those characterized by a negative migration balance) to 20 provinces of immigration (those characterized by a positive migration balance (Table 5).

Table 5 - Total population and demographic balances by region; 2003-2008

		2003	2008	TB	NB	MB	TB	NB	MB
		Absolute values in thousand					% values		
1	Guangdong	80,069	96,881	16,812	3,224	13,588	21.0	4.0	17.0
2	Zhejiang	47,111	51,973	4,862	1,240	3,622	10.3	2.6	7.7
3	Jiangsu	74,552	77,929	3,377	914	2,463	4.5	1.2	3.3
4	Beijing	14,657	17,206	2,549	157	2,392	17.4	1.1	16.3
5	Shanghai	17,224	19,165	1,941	154	1,787	11.3	0.9	10.4
6	Tianjin	10,177	11,938	1,760	95	1,666	17.3	0.9	16.4
7	Liaoning	42,380	43,801	1,422	256	1,165	3.4	0.6	2.7
8	Shandong	91,856	95,592	3,735	2,741	994	4.1	3.0	1.1
9	Xinjiang	19,469	21,632	2,163	1,200	963	11.1	6.2	4.9
10	Hebei	68,140	70,945	2,805	2,317	488	4.1	3.4	0.7
11	Fujian	35,112	36,584	1,472	1,166	306	4.2	3.3	0.9
12	Yunnan	44,051	46,116	2,065	1,782	283	4.7	4.0	0.6
13	Shanxi	33,360	34,625	1,265	1,040	224	3.8	3.1	0.7
14	Shaanxi	37,145	38,188	1,043	824	219	2.8	2.2	0.6
15	Jilin	27,220	27,753	533	327	206	2.0	1.2	0.8
16	Hainan	8,164	8,669	505	400	106	6.2	4.9	1.3
17	Ningxia	5,839	6,273	435	336	99	7.4	5.7	1.7
18	Tibet	2,718	2,913	195	165	30	7.2	6.1	1.1
19	Jiangxi	42,823	44,664	1,842	1,826	15	4.3	4.3	0.0
20	Inner Mongoli	23,958	24,504	546	543	3	2.3	2.3	0.0
21	Qinghai	5,375	5,624	248	268	*-20*	4.6	5.0	-0.4
22	Heilongjiang	38,403	38,827	424	482	*-58*	1.1	1.3	-0.2
23	Gansu	26,203	26,677	474	891	*-417*	1.8	3.4	-1.6
24	Guizhou	38,957	38,503	*-455*	1,564	*-2,019*	-1.2	4.0	-5.2
25	Guangxi	48,893	48,887	*-6*	2,171	*-2,177*	0.0	4.4	-4.5
26	Chongqing	31,508	28,819	*-2,689*	575	*-3,265*	-8.5	1.8	-10.4
27	Hubei	60,419	57,972	*-2,447*	950	*-3,396*	-4.0	1.6	-5.6
28	Hunan	67,073	64,763	*-2,310*	1,902	*-4,212*	-3.4	2.8	-6.3
29	Henan	97,312	95,713	*-1,599*	2,717	*-4,316*	-1.6	2.8	-4.4
30	Anhui	64,526	62,276	*-2,250*	2,209	*-4,459*	-3.5	3.4	-6.9
31	Sichuan	87,578	82,609	*-4,970*	1,313	*-6,282*	-5.7	1.5	-7.2
	Total	1,292,270	1,328,020	35,750	35,750	0	2.8	2.8	0.0
	Pos. Bal.			52,474	35,750	30,620			
	Neg. Bal.			-16,724	0	-30,620			

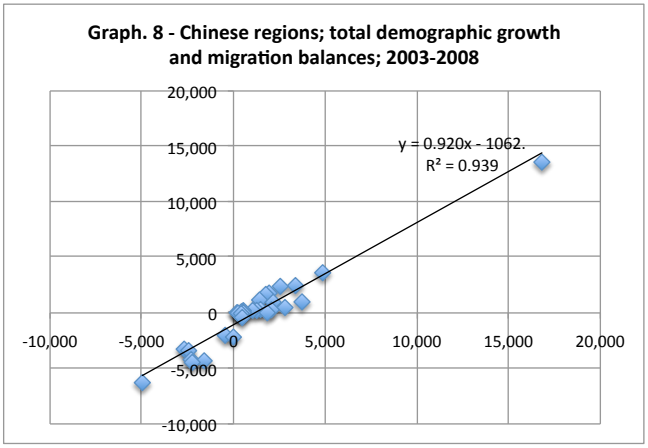
Migration flows have also been heavily concentrated, the first eight provinces by size of migration balance having absorbed 28 million inter-provincial migrants, i.e. 91.9 per cent of the total inter-provincial migration balance[37], while the provinces characterized by the highest demographic decline have registered the highest number of migrants. Our computations do, therefore, show that the majority of inter-provincial migration flows go from the provinces at the western border of the coastal area to the coastal provinces.

Table 6 - Provinces of immigration and emigration; 2003 - 2008

	Pop. 2003	Pop. 2008	Natural balance	Migr. balance	Total balance	Natural balance %	Migr. Balance %
First 8 regions by positive migration balance	378,025	414,484	8,782	27,677	36,459	24.1	75.9
Other regions with positive migration balance	417,979	433,994	13,567	2,448	16,015	84.7	15.3
First five regions by negative migration balance	311,104	296,439	6,949	-21,614	-14,665	-47.4	147.4
Other 3 regions with negative migration balance	185,162	183,103	6,452	-8,512	-2,060	-313.2	413.2

The following graphs documents the fact that in this phase the provincial rates of population growth are mainly explained by inter-provincial migrations (graph 8).

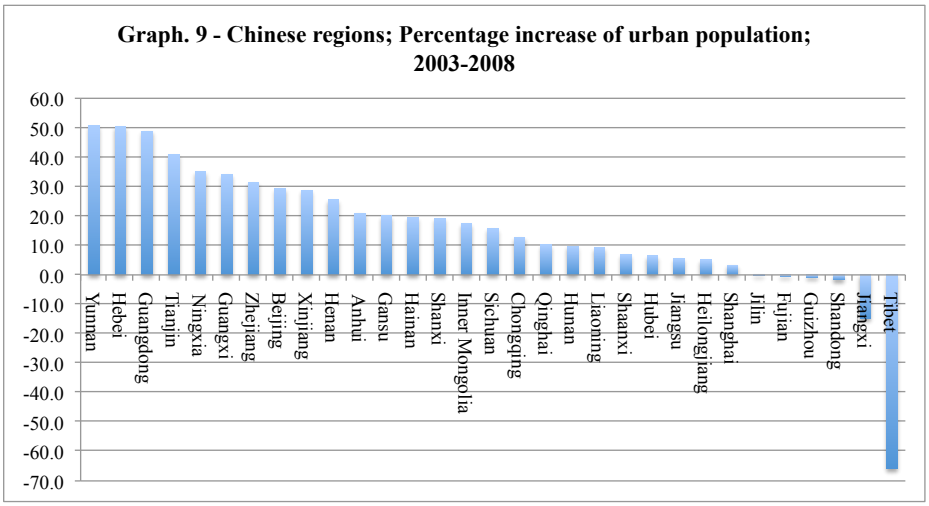
[37] In 2008 these regions accounted for 31.2 per cent of total Chinese population, while the natural balances has been equal to 24.6 per cent of the national value.



Having documented the level of the rural - urban migration and the level and direction of the net interprovincial migration flows, we have then tried to understand and link these two typologies of flows.

The provincial rates of urbanization present an extremely large variance. At the national level, urban population has grown by 15.8 per cent. Fifteen regions register values above average, the ranking being lead by Yunnan, Hebei, Guangdong and Tianjin where urban population has increased by around 50 per cent. At the other extreme 13 regions are characterized by values below 10 per cent or by negative values.

According to our computations, in 23 provinces urban areas present positive migration balances and rural areas negative migration balances[38]. However, in a sub-group of 13 provinces the process of urbanization is the result of both rural-urban migration flows and interprovincial migration flows, while in a second sub-group of 10 provinces emigration from rural areas exceeds the immigration in urban areas and therefore the provincial migration balance is negative.



In 6 regions of the first sub-group (Beijing, Guangdong, Xinjiang, Tianjin, Liaoning and Zhejiang), that represents the demographic magnet of China, the role of inter-provincial migration is largely predominant and explains 70 per cent of the migration balance of urban areas. On the other seven, 92 per cent of the process of urbanization is due to rural-urban migration.

[38] In table 3.5 the sign of the migration balance reflect that of the area considered. In the case of Guangdong, for instance, the province has a positive migration balance of 13,588 million, the rural area a negative migration balance of 4,387 million; therefore, the migration balance of urban areas (17,976 million) is the sum of the migrant to the region and the migrant from the rural areas.

In the second group of regions, we can distinguish between those where rural migration has been directed mainly to urban areas and those where rural migrants have moved mainly to other provinces: Heilongjiang, Qinghai, Gansu, Guangxi and Henan belong to the first group; Anhui, Sichuan, Chongqing, Hunan and Hubei to the second.

The other 10 regions present other three different migration patterns:

1. In two regions, Jiangsu and Shanghai, the total migration balance is positive and has provoked an increase in both urban and rural populations;
2. In Guizhou, both the urban and rural migration balances are negative;
3. In five regions, the total migration balance is positive and the urban migration balance is negative; the result is a net process of ruralization.

Table 7 - Total migration balances by province and urban/ rural; 2003-2008

		Migration Balance		
		Total	Urban	Rural
1	Guangdong	13,588	17,976	-4,387
2	Zhejiang	3,622	6,353	-2,732
3	Beijing	2,392	3,100	-708
4	Tianjin	1,666	2,538	-872
5	Liaoning	1,165	2,028	-862
6	Xinjiang	963	1,458	-495
7	Hebei	488	9,012	-8,524
8	Yunnan	283	4,579	-4,297
9	Shanxi	224	2,037	-1,813
10	Shaanxi	219	679	-460
11	Hainan	106	494	-388
12	Ningxia	99	597	-498
13	Inner Mongolia	3	1,597	-1,594
	Sub-total	24,819	52,448	-27,629
14	Qinghai	-20	106	-125
15	Heilongjiang	-58	774	-832
16	Gansu	-417	1,159	-1,576
17	Guangxi	-2,177	4,011	-6,188
18	Chongqing	-3,265	1,363	-4,628
19	Hubei	-3,396	1,168	-4,564
20	Hunan	-4,212	1,662	-5,874
21	Henan	-4,316	6,086	-10,402
22	Anhui	-4,459	3,565	-8,024
23	Sichuan	-6,282	3,689	-9,971
	Sub-total	-28,601	23,583	-52,184
24	Jiangsu	2,463	1,673	790
25	Shanghai	1,787	392	1,395
	Sub-total	4,250	2,065	2,185
26	Guizhou	-2,019	-545	-1,474
27	Shandong	994	-2,116	3,110
28	Fujian	306	-690	996
29	Jilin	206	-141	347
30	Tibet	30	-1,344	1,374
31	Jiangxi	15	-4,048	4,063
	Sub-total	1,551	-8,339	9,890

Therefore, according to these estimates, in the last five years the process of urbanization has affected 26 Chinese provinces, while data suggest that 5 provinces have been affected by the opposite trend. In the first 26 regions urban population has increased by around 78 million, 51 million coming from the rural areas of the same region and 27 million from other regions. In summary:

- Between 1995 and 2008, at least 217 million people (almost 15 million per year) have left rural areas to move to urban areas, but there are indications that this phenomenon is slowing down;
- Between 2003 and 2008, around 75 million people have moved from rural to urban areas, and other thirty million have moved between provinces -the areas of departures being represented mainly by the provinces west of the coastal regions and the areas of arrival by the coastal provinces- bringing the total migration balance to an astonishing level of more than twenty million per year;
- Some provinces have been characterized by a process of ruralization, a process of which we will find more evidence analyzing the provincial labour markets and that will deserve some more careful analysis;
- In spite of the extremely large inter-provincial differentials in natural growth, the provincial levels of demographic growth are explained mainly by interprovincial migration balances;
- Finally, it must be underlined that all previous values refer to migration balances; this clearly implies that the amount of people that have migrated work (floating population and migrants) has been much higher; this implies that the notable difficulties encountered in estimating the floating population trough surveys and even Censuses bring to under-estimate the size of migration flows.

4. The Chinese labour market: 2003-2008

4.1 The long term background

Between 1953 and 2008, Chinese WAP has almost tripled growing from 349 to 967 million[39] (+618 million). One of the greatest challenges that China had to face was, therefore, that of creating a number of jobs coherent with its fast growing labour supply. According to official statistics, China has successfully faced the problem creating, on the average, 10.2 million jobs per year.

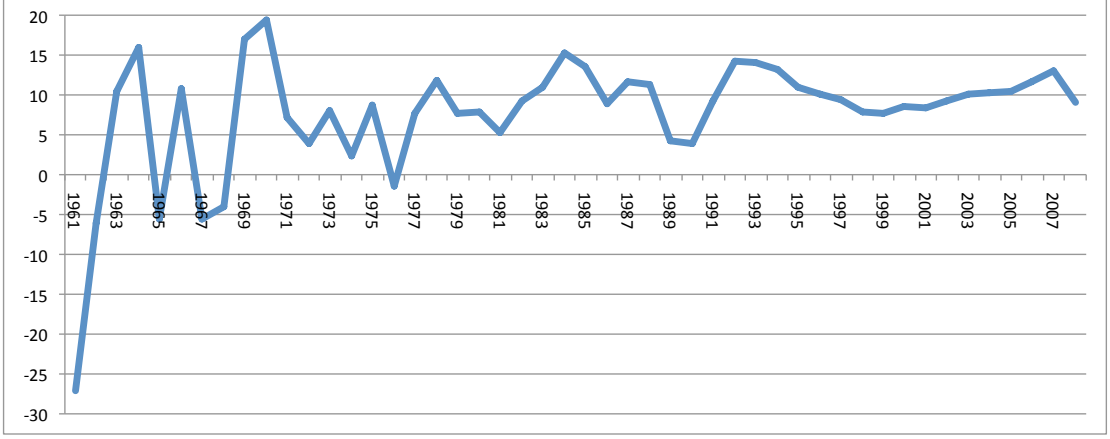
Although employment data must be taken with extreme caution, a more articulated analysis of employment growth during this period allows to highlighting a series of phases that reflect different political philosophies, the economic policies they have inspired, the periods in which labour has been accumulated in the agricultural sector and the periods in which has been de-accumulated.

A command economy in which the labour market is obviously totally absent characterizes the period up to 1978. In this period, the goal of eliminating poverty was pursued through a system of cradle-to-grave job, wage, and retirement security that has become known as the Iron rice bowl. From an economic perspective this period - that is remembered mainly for its violent power struggles, the collectivization of agriculture, the backyard furnaces, the Great leap forward, the Cultural Revolution- is dominated by the effort to create a dual economy based on a fast parallel growth of agriculture and industry. The increase in agricultural production was pursued to sustain urban consumption and earn foreign exchange, while industrialization aimed to develop the heavy industry sector, a goal deemed necessary to make China independent from Russia. It is also punctuated by numerous economic downturns provoked by the implementation of inconsiderate economic policies and natural disasters. At the end of the period, the Chinese economy "was generally pictured as "on the brink of disaster" due to its various imbalances as well as problems of low

[39] In the same period total population has increased by around 753 million (from 545 to 1328). In 1950, with a total population of around 545 million China was the most populated country in the world and accounted for 21.5% of world population. It also accounted for the largest share of births (more than ¼) and provided the biggest contribution to the increase in world population (around 23 per cent). In 2010, China is still the most populated country in the world. It accounts for 19 per cent of world population; its contribution to the total number of births registered in the planet has, however, decreased to 13.3 per cent and its contribution to the increase in world population to 11 per cent.

productivity growth and poor incentives[40]. Although years of extremely high production growth alternated with years of equally intense decline, GDP grew at an average rate of 6.2 per cent and total employment by 7 million per year. It must however be underlined that 70 per cent of employment growth (4.7 million per year) was concentrated in agriculture. Since WAP grew at an average rate of more than 14 million per year and rural population by almost 16 million per year, it is evident that large quantities of surplus labour were accumulated in rural areas, probably much beyond the value indicated by official data.

Graph. 10 - China; Real GDP; Growth rates; 1961-2008



The year 1979 represents a milestone in the economic and social history of China, marking the beginning of the modernization phase during which the Chinese government has progressively and pragmatically introduced a series of reforms aimed to combine central planning and market in order to increase productivity, living standards and foster technological progress.

From a labour market perspective it was at the beginning of the 80s that the Chinese government started to grant SOEs autonomy to hire and dismiss workers and adjust compensations in accordance with profitability and workers performance[41]. In 1986 a new regulation[42] required SOEs to re-contract old workers and recruit new ones on the basis of voluntary contracts. The iron bowl system began to crack and with the introduction of labour market mechanisms Chinese workers started to be confronted with the problems of finding a job and facing the risk of unemployment. However, for the time being, SOEs were asked not to lay-off workers and total employment registered a massive increase (+17.8 million per year) in line with that of WAP, in spite of the notable slowdown in GDP growth registered at the end of the 80s. Although agriculture accounts for only 36 percent of total employment growth, and the implementation of the responsibility system[43] contributed to increase agricultural output, it can be safely argued that also in this phase a large amount of excess labour was accumulated in rural areas, so that agricultural employment reached its historical maximum in 1991.

[40] The major imbalances included an emphasis on capital construction and neglect of agriculture and light industry; emphasis on production and neglect of people's livelihood; emphasis on production and neglect of distribution; and emphasis on high accumulation and neglect of efficiency and consumption; see Amei Zhang (1996)
[41] Cai Fang, Du Yang and Wang Meyan, 2009, p.12
[42] Temporary Regulation on Labour Contract System of State Owned Enterprises
[43] Under this system, families lease land for a period of up to thirty years, and must agree to supply the state an agreed quota of grain or industrial crops at a fixed low cost in return. The remaining surplus can either be sold to the state or on the free market.

Table 8 - China; Total employment by sector; 1953 - 2008				
	Total	Agriculture	Industry	Services
	Absolute values			
1953	213.6	177.5	17.2	18.8
1978	401.5	283.2	69.5	48.9
1991	654.9	391.0	140.2	123.8
1998	706.4	351.8	166.0	188.6
2002	737.4	368.7	157.8	210.9
2008	774.8	306.5	211.1	257.2
	Absolute change			
1953-78	174.7	117.0	39.0	19.0
1978-91	266.6	96.6	84.0	86.0
1991-98	51.5	-39.2	25.8	64.8
1998-02	31.0	16.9	-8.2	22.3
2002-08	37.4	-62.2	53.3	46.3
	Average absolute yearly change			
1953-78	7.0	4.7	1.6	0.8
1978-91	17.8	6.4	5.6	5.7
1991-98	7.4	-5.6	3.7	9.3
1998-02	7.8	4.2	-2.0	5.6
2002-08	6.2	-10.4	8.9	7.7
	Average yearly percentage change			
1953-78	3.6	2.9	9.9	4.4
1976-91	4.6	2.2	10.0	15.2
1991-98	1.1	-1.4	2.6	7.5
1998-02	1.1	1.1	-1.3	2.6
2002-08	0.8	-3.4	4.2	3.0

In the following period (1992-1998) SOEs[44] started to face an increasing competition from the private sector that could also benefit from a massive inflow of migrants. This phase marks, in fact, the beginning of the de-accumulation process of rural excess labour, agricultural employment declining at an average yearly rate of 5.6 million per year. The restructuring process of the public sector and the consequent lay-offs brought the Chinese authorities to strengthen the protection of urban workers, also through discriminatory policies against migrants, and to encourage, both politically and financially, small sized private enterprises[45] (p12). As a consequence, in this phase industrial employment registered a moderate growth (+3.7 million per year), while the increase in total employment was sustained mainly by the service sector (+9.3 million per year), characterized by a high level of informal labour relationships. It must, however, be underlined that it was in 1994 that the Chinese government adopted the Labour Law.

The process of SOEs restructuring peaked between 1999 and 2002, a period in which GDP growth remained on the average below 10 per cent. The increase in industrial employment generated by the private sector was not sufficient to offset the decline in public industrial employment (overall industrial employment declined on the average by 2 million per year), while also the growth in the service sector slowed down (+5.6 million). As a consequence, agriculture was called again to absorb a large portion of the increase in WAP that amounted in this period to around 15 million per year.

The entry of China in the WTO marks the beginning of the present phase of Chinese economic development characterized by an increasing amount of FDI, a progressive decline of the public sector and growth rates that have averaged more than 10 per cent per year, in spite of the global financial crisis that has hit the world at the end of 2008. This phase has also

[44] At the beginning of the '90s state and collective firms still accounted for almost 80 per cent of total employment.
[45] Cai Fang, Du Yang and Wang Meyan, 2009, p.12

witnessed the introduction of more detailed labour market regulations[46] together with a large expansion of the informal sector, a renewed process of de-accumulation of the surplus labour while registering the first signals of labour shortages, and a notable increase in labour unrest.

4.2 Stock analysis

Population by main age groups – Between 2003 and 2008, the number of people in WAP has notably increased (+ 6.3 per cent). Even more pronounced the increase in the number of the elderly (+13 per cent), while the number of young people has sharply declined (-11.9 per cent). As a consequence, the weight of WAP has reached an unprecedented value of 72.8 per cent.47

Table 9 - Urban and rural population by main age groups; 2003 and 2008

	Urban	Rural	Total	Urban	Rural	Total
2003	Absolute values			Percentage composition		
0-14	97.6	188.0	285.6	18.6	24.5	22.1
15-64	386.0	523.8	909.8	73.7	68.2	70.4
65+	40.2	56.7	96.9	7.7	7.4	7.5
Total	523.8	768.5	1292.3	100.0	100.0	100.0
2008	Absolute values			Percentage composition		
0-14	98.8	152.9	251.7	16.3	21.2	19.0
15-64	459.3	507.5	966.8	75.7	70.4	72.8
65+	48.6	61.0	109.6	8.0	8.5	8.2
Total	606.7	721.4	1328.0	100.0	100.0	100.0
2003-08	Absolute change			Percntage change		
0-14	1.2	-35.1	-33.9	1.2	-18.7	-11.9
15-64	73.3	-16.3	57.0	19.0	-3.1	6.3
65+	8.4	4.3	12.6	20.8	7.6	13.0
Total	82.9	-47.2	35.8	15.8	-6.1	2.8

Due to the consistent migration flows we have just documented, in urban areas WAP has registered a staggering increase (+19 per cent) and now represents more than ¾ of urban total population. In spite of their lower fertility rates, urban areas have also registered a modest increase of the younger generations.

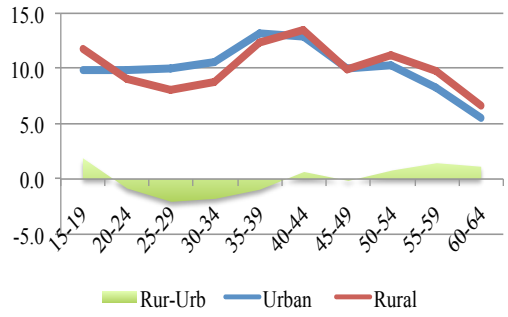
During the same time interval, in rural areas WAP has declined by 16 million (-3.1 per cent). The decline of the younger generations has been even more impressive (-35.1 million, -18.7 per cent) and their weight has decreased by more than 3 percentage points. However, the share of the first age group remains much higher in rural (21.2 per cent) than in urban areas (16.3 per cent). Ageing has affected more rural than urban areas so that in 2008 the percentage of elderly has become higher in rural areas than in urban areas (8.5 per cent versus 8 per cent).

[46] Between the most relevant the Minimum Wage Regulations (2004), the Employment Contract law (2008), the Employment Promotion Law (2008), and the Labour Disputes Mediation and Arbitration Law (2008).
[47] In 1952 the share of WAP was 61.9 per cent while the percentage of young people was 33.6 per cent.

Table 10 - Urban and rural employment by main age groups; 2003-2008				
	2003	2008	Abs. Var.	% Var
Urban				
15-64	253.8	295.5	41.7	16.4
65+	2.6	6.6	4.0	154.8
Total	256.4	302.1	45.7	17.8
Rural				
15-64	469.7	444.6	-25.1	-5.3
65+	18.3	28.0	9.7	53.0
Total	487.9	472.7	-15.2	-3.1
Total				
15-64	723.5	740.1	16.6	2.3
65+	20.8	34.7	13.9	66.7
Total	744.3	774.8	30.5	4.1
Urban/total	Percentage incidence			
15-64	35.1	39.9	4.8	
65+	12.4	19.0	6.6	
Total	34.4	39.0	4.5	

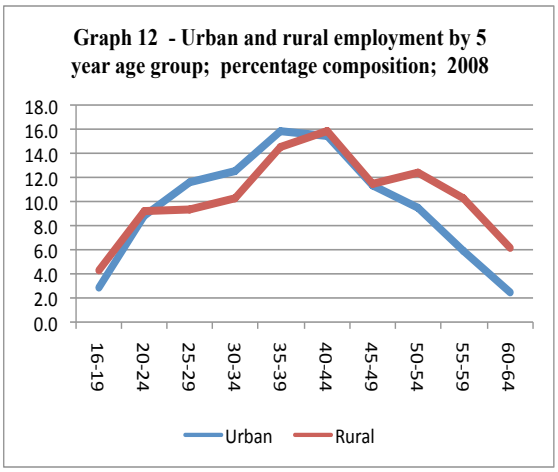
A longitudinal comparison between the population by five-year age groups in 2003 and 2008 presents very relevant inconsistencies that are reflected in an amplified way if we consider separately urban and rural populations. These inconsistencies do not allow comparing the working age population structures in the two years and performing a generational flow analysis. Taking for good the 2008 age distribution, rural population presents a relative higher concentration in the first and in the last three age groups, while urban population is characterized by a relatively higher presence of people in the prime-age groups (graph 11).

Graph 11 - Urban and rural WAP by 5 year age group; percentage composition; 2008



Employment – Between 2003 and 2008, total employment has increased by more than 30 million (4.1 per cent) a figure that suggests a rather good performance of the Chinese labour market. It must, however, be pointed out that the increase in total employment "hides" the fact that almost half of employment growth is due to workers with 65 years or more. If we limit ourselves to employment in working age, the increase is of 2.3 per cent a relevant, but much less impressive result.

The rural-urban perspective provides a first explanation of the migration flows we have previously discussed. Urban employment in working age has increased by 41.7 million (+16.4 per cent), while rural working-age employment has declined by 25.1 million (-5.3 per cent). The percentage of urban working-age employment has therefore increased from 35.1 to 39.9 per cent. More than 2/3 of the additional employed with 65 years or more, belong to rural areas, which implies that the large majority can be classified as disguised unemployed in the agricultural sector.



The average age of Chinese workers (42.9) is relatively high due the relevance of the agricultural sector. For the same reason, rural workers are, on the average, much older that urban workers. The difference in average age (44.8 versus 40) is accounted for by the fact that urban workers are much more concentrated in the age groups up to 44, while workers with 50 or more years of age account for 1/5 of total employment in urban areas, but for almost 1/3 in rural areas.

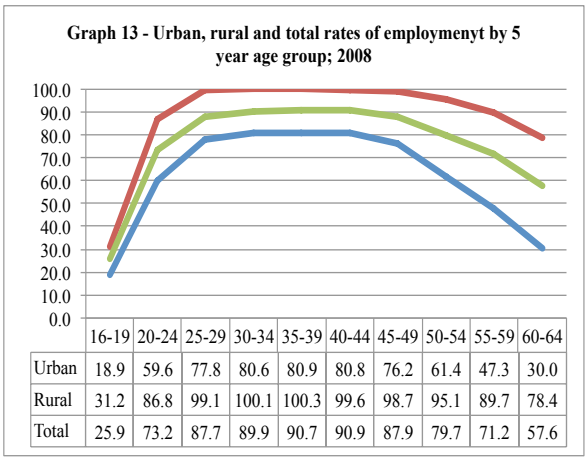
Rates of employment - As a result of the changes in WAP and employment, the 15-64 rate of employment has declined by around 3 percentage points, but remains extremely high (76.6 per cent). Employment rates have declined both in urban and rural areas by a similar value, leaving the urban-rural differential almost unchanged.

Table 11 - Rates of employment; total, urban and rural - 2003 and 2008

	2003	2008	2003-08
Urban	65.8	64.3	-1.4
Rural	89.7	87.6	-2.1
Total	79.5	76.6	-3.0

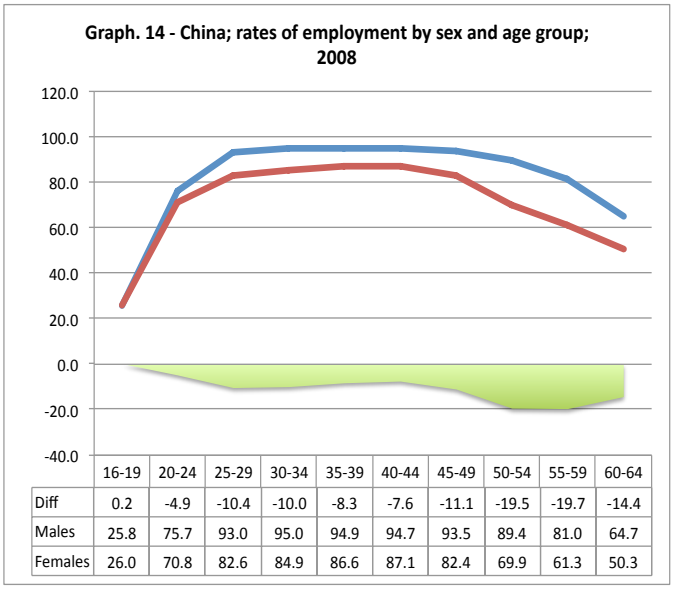
The urban employment rate of around 65 per cent suggests that a significant portion of urban employment (for instance in household services) is informal and is not captured by the surveys, while the value of around 88 per cent of rural areas reflect the fact that those that belong to an agricultural household are almost all automatically classified as employed in the agricultural sector.

This becomes even more evident when we consider the specific rates of employment by five-year age groups (graph 13). In rural areas the specific rates of employment are up to 100 per cent for all age groups between 30 and 50, and remain above 80 for the age group between 50-59. More realistically, the urban rates of employment of the central age groups are around 80 per cent, while progressively increasing for the younger age group and rapidly declining for older workers.



	16-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64
Urban	18.9	59.6	77.8	80.6	80.9	80.8	76.2	61.4	47.3	30.0
Rural	31.2	86.8	99.1	100.1	100.3	99.6	98.7	95.1	89.7	78.4
Total	25.9	73.2	87.7	89.9	90.7	90.9	87.9	79.7	71.2	57.6

The extremely high rates of total employment that characterize both men and women are reflected by their age specific rates of employment. For all age groups between 25 and 49 men's rates are largely above 90 per cent while that of the 50-54 just falls short of the 90 per cent mark. The women's age specific rates present a shape similar to that of men's**,** the differential increasing up to the 25-29 age group and then stabilizing up to the age of 50. Larger differentials characterize the last age groups due to the different age of legal retirement.



	16-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64
Diff	0.2	-4.9	-10.4	-10.0	-8.3	-7.6	-11.1	-19.5	-19.7	-14.4
Males	25.8	75.7	93.0	95.0	94.9	94.7	93.5	89.4	81.0	64.7
Females	26.0	70.8	82.6	84.9	86.6	87.1	82.4	69.9	61.3	50.3

Employment by sector – In the five-year period we are considering, the increase in total employment has resulted from a decline by 59 million in Agriculture, an increase by 50 million in Industry and by 39 million in Services (table 12). These data capture a fundamental turning point in China with agriculture employment falling on the average by more than 3 per cent per year and employment in industry growing by more than 6 per cent, while the process of tertiarization continued at a steady pace (3.5 per cent per year).

As a consequence, the weight of agricultural employment has declined by almost 10 percentage points (from 49.1 to 39.6 per cent), while the weight of industry and services has reached respectively 27.2 per cent and 33.2 per cent.

Table 12 - Total employment by sector; 2003 and 2008							
	2003	2008	2003-08		2003	2008	2003-08
	Abs. Values		Abs. Change	% Change	% Comp.		Diff.
Agriculture	365.5	306.5	-58.9	-16.1	49.1	39.6	-9.5
Industry	160.8	211.1	50.3	31.3	21.6	27.2	5.6
Services	218.1	257.2	39.1	17.9	29.3	33.2	3.9
Total	744.3	774.8	30.5	4.1	100.0	100.0	0.0

Interesting results emerge when we consider the evolution of employment by sector in urban and rural areas (table 13). According to our estimates, the decline in agricultural employment is the result of a decline by almost 100 million in rural areas (-31 per cent) and of an increase by 41 million in urban areas (+97 per cent). At the same time 31 of the 50 million additional jobs in the industrial sector (61 per cent) have been located in rural areas. Finally, employment in the service sector has declined in urban areas and increased in rural areas.

Table 13 - Total employment by area and sector; 2003-2008							
	2003	2008	2003-08		2003	2008	2003-08
	Abs. Values		Abs. Change	% Change	% Comp.		Diff.
Urban							
Agriculture	42.0	82.9	40.9	97.2	16.4	27.5	11.1
Industry	65.9	85.5	19.6	29.8	25.7	28.3	2.6
Services	148.4	133.7	-14.8	-10.0	57.9	44.2	-13.7
Total	256.4	302.1	45.7	17.8	100.0	100.0	0.0
Rural							
Agriculture	323.4	223.6	-99.8	-30.9	66.3	47.3	-19.0
Industry	94.9	125.6	30.7	32.4	19.4	26.6	7.1
Services	69.6	123.5	53.9	77.3	14.3	26.1	11.9
Total	487.9	472.7	-15.2	-3.1	100.0	100.0	0.0

As a result in 2008:

- The weight of agricultural employment has reached 27.5 in urban areas and declined to 47.3 in rural areas;
- The share of industrial employment has become quite similar in urban and rural areas (28.3% and 26.6 pr cent);
- The share of employment in the service sector remains strongly unbalanced (44.2 per cent in urban areas, 26.1 per cent in rural areas).

These results suggest that the definition of urban and rural areas is no more consistent with the present situation. While it remains true that rural areas are specialized in agriculture, in 2008 the share of agricultural employment in rural areas has declined from 89 to 73 per cent, 59 per cent of industrial employees are rural dwellers as well as 48 per cent of the employed in the service sector.

It is reasonable to suppose that in the last years industrial activities have been located in rural areas at the border of already crowded and more expensive urban areas, while the demand of agricultural products has boosted agricultural production and employment in areas close to urban centers.

These results are also in line with the findings on the floating population and our analysis of migration balances that have indicated the relevance of migrations flows toward rural areas. It was generally assumed that this would necessarily imply movement of rural workers from farms, where they were disguised unemployed, to more productive farms. On the light of these results it could well be that at least part of these movements were in fact motivated by the localization in rural areas of industrial and service activities, while movements toward urban areas could be movements from one farm to another.

Graph 15; Weight of rural employment by sector; 2003 and 2008

	Agriculture	Industry	Services	Totale
2003	88.5	59.0	31.9	65.6
2008	72.9	59.5	48.0	61.0
2003-08	-15.5	0.5	16.1	-4.5

If these observations would prove correct, they would just reinforce the idea that the urban - rural classification normally adopted by socialist and transition countries, tends to become obsolete once development set in and localization of both agricultural and extra-agricultural activities start to have more complex motivations.

Employment by educational attainment - China's drive to provide basic literacy to its fast growing population has been a very successful one. Around 1950 the literacy[48] rate was around 15-20%. According to Census data, the literacy rate had increased to around 66 per cent by 1964, to 77 per cent by 1982, to 84 per cent by 1990 and to 93 per cent by 2000.

In 2008[49], the rate of illiteracy of the population aged 15 or more was estimated at 7.8 per cent[50]. It affected mainly women and the rural population[51]. Most importantly, it was concentrated between the elderly. In the same year the percentage of population (aged 6 and over) with at least a senior secondary education, college or more had reached 20.4 per cent. Beijing (51.5 per cent), Shanghai (47.7 per cent) and Tianjin (40.2 per cent) lead the provincial ranking followed, at notable distance, by the other provinces with values included between 25.4 per cent in Jilin and 5.1 per cent in Tibet.

Coming to the employed, between 2003 and 2008, the natural process of ageing and generational turnover has continued to progressively reduce the number and share of illiterate. However, while the number and the share of those with up to compulsory education has continued to increase, the number and share of people with high school, college and university degrees does not show relevant changes. In 2008, less than 20 per cent of the employed had more than compulsory education and only 6.9 per cent a university degree (table 14). China educational gap with respect to more developed countries remains therefore very large.

[48] In 1950 the government set recognition of 1,000 characters as the standard for literacy and 300 for illiteracy. Until 1978, adult literacy was given priority. A reading primer for peasant was distributed in 1951 to rural people, pinyin was developed; Putonghua became the standard and characters were simplified.
[49] The current literacy rate is set at 2,000 characters for urban dwellers and to 1,500 for rural dwellers.
[50] CNSB, 2009
[51] Women represent 74.1 per cent of the illiterate; 71.8% of the illiterate belong to the rural population.

Table 14 - Total employment by educational level; 2003 and 2008				
	No schooling	Up to compul.	High school	University
	Absolute values			
2003	52.9	539.4	101.3	50.7
2008	41.0	582.2	98.5	53.1
Diff.	*-11.9*	*42.7*	*-2.8*	*2.5*
	% composition			
2003	7.1	72.5	13.6	6.8
2008	5.3	75.1	12.7	6.9
Diff.	*-1.8*	*2.7*	*-0.9*	*0.0*

The impact of China efforts on the educational sphere is well reflected by the fact that the percentage of employed with lower education increases with age, while that of the more educated presents the opposite trend: almost 30 per cent of the employed aged 16-29 have more than compulsory education, a percentage that declines to 10 per cent for those between 50 and 64 (table 15).

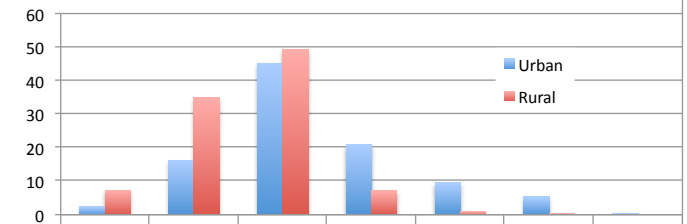
Tab. 15 - Total employment by sex, main age groups and education; 2008								
	No sch.	Up to compul.	High sch.	University	No sch.	Up to compul.	High sch.	University
	Males				Males			
16-29	518	61,590	16,516	8,803	*0.6*	*70.4*	*18.9*	*10.1*
30-49	2,334	151,114	33,594	18,011	*1.1*	*73.7*	*16.4*	*8.8*
50-64	5,162	82,157	10,571	3,624	*5.1*	*80.9*	*10.4*	*3.6*
16-64	8,015	294,861	60,681	30,437	*2.0*	*74.8*	*15.4*	*7.7*
65+	4,399	16,219	481	141	*20.7*	*76.4*	*2.3*	*0.7*
Total	12,413	311,081	61,162	30,579	*3.0*	*74.9*	*14.7*	*7.4*
	Females				Females			
16-29	887	57,981	13,217	9,070	*1.1*	*71.4*	*16.3*	*11.2*
30-49	6,617	147,846	21,389	12,417	*3.5*	*78.5*	*11.4*	*6.6*
50-64	14,441	58,503	2,703	1,035	*18.8*	*76.3*	*3.5*	*1.3*
16-64	21,945	264,330	37,308	22,522	*6.3*	*76.4*	*10.8*	*6.5*
65+	6,617	6,765	61	15	*49.2*	*50.3*	*0.5*	*0.1*
Total	28,563	271,095	37,370	22,537	*7.9*	*75.4*	*10.4*	*6.3*
	Total				Total			
16-29	1,405	119,571	29,733	17,873	*0.8*	*70.9*	*17.6*	*10.6*
30-49	8,951	298,960	54,982	30,428	*2.3*	*76.0*	*14.0*	*7.7*
50-64	19,604	140,660	13,274	4,658	*11.0*	*78.9*	*7.4*	*2.6*
16-64	29,960	559,191	97,989	52,959	*4.0*	*75.6*	*13.2*	*7.2*
65+	11,016	22,985	543	157	*31.7*	*66.2*	*1.6*	*0.5*
Total	40,976	582,175	98,532	53,116	*5.3*	*75.1*	*12.7*	*6.9*

On the average women are less educated than men: the difference is very small for the younger age groups and increases with age (table 16).

Tab. 16 - Total employment by sex, main age groups and education; percentage of women; 2008				
	Females/Total			
16-29	63.1	48.5	44.5	50.7
30-49	73.9	49.5	38.9	40.8
50-64	73.7	41.6	20.4	22.2
16-64	73.2	47.3	38.1	42.5
65+	60.1	29.4	11.3	9.8
Total	69.7	46.6	37.9	42.4

The educational level of rural employed remains much lower than that of urban employed (graph 16), the latter being characterized by higher percentages of employed with educational levels up to junior secondary education and much lower for employed with senior secondary education and university. It must also be underlined that 78 per cent of the employed with up to compulsory education work in rural areas, while 88 per cent of employed with university degree work in urban areas.

Graph 16 - Urban and rural areas; employed by educational level; percentage composition; 2008



	No Schooling	Primary	Junior Secondary	Senior Secondary	College	University	HigherEd.
Urban	2.4	16.3	45.2	20.8	9.5	5.3	0.5
Rural	7.2	34.9	49.4	7.2	1.0	0.3	0.0

Unemployment – Unemployment does not receive much attention in Chinese labour market statistics. Estimates of the economically active population and employment allow computing the amount of "surveyed" unemployment. The Employment Centers provide the number of people registered (at end year) in urban areas and information on their demographic, economic and social characteristics.

According to these sources, in 2008 surveyed unemployed amounted to 17.6 million and registered unemployment to 8.9 million. While the literature suggests that surveyed unemployment refers only or mainly to urban areas[52], it is evident that -given the rules that govern the Employment Centers and therefore determine the number of people that have the right to enroll together with the incentives to do so- registered unemployment largely underestimates unemployment as defined by international standards[53]. It must also be pointed out that the CSB publishes a time series of the "Registered Unemployment Rate in Urban Areas", that seems to be computed as the ratio between the number of registered unemployed and the active population in the extra-agricultural sectors and is therefore not comparable with the standard rate of unemployment.

We will therefore limit our analysis to point out some characteristics of urban registered unemployment that could provide some insights on the functioning of the urban labour market. However, it must be kept in mind that the characteristics that will emerge could reflect more the different incentives and propensity to enroll of different socio-economic groups and the fact that a urban residence permit is a precondition for enrollment, than the real situation of the urban labour market.

The average age of registered unemployed is relatively high (35 years), 47.9 per cent being in the 30-49 age group and only 41.1 per cent in the 16-29 age bracket. The concentration in the central age group is higher for women (53.4 per cent) than for men (42 per cent).

The largest proportion of registered unemployed imputes their situation to "companies problems" (table 17). This motivation is indicated by 1/3 of men and 24 per cent of women.

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[52] Cai Fang and others (2009) propose an unemployment rate computed as the ratio between surveyed unemployed and urban labour force, following a previous example in IMF (2003).

[53] According to the National Bureau of Statistics (NBS), "the registered unemployed persons in urban areas refer to the persons who are registered as permanent residents in the urban areas, engaged in non-agricultural activities, aged within the range of working age (16-50 for male and 16-45 for female), capable to work, unemployed but desirous to be employed and (who) have been registered at the local employment service agencies to apply". Such a definition brings necessarily to underestimate the level of urban unemployment since i) it considers only the age ranges 16-50 for men and 16-45 for women; ii) laid-off (*xiagang*) workers are not regarded as unemployed; iii) unemployed persons without urban resident status (*hukou)*, i.e. rural migrants, are excluded; iv) unemployed persons have an incentive to register at their local employment service agencies if they expect to derive some benefit such as social security payments or improved job prospects, but many would neither qualify for social security nor expect to find employment by this means; seeJohn Knight, Jinjun Xue, 2006; pp. 3 and 4.

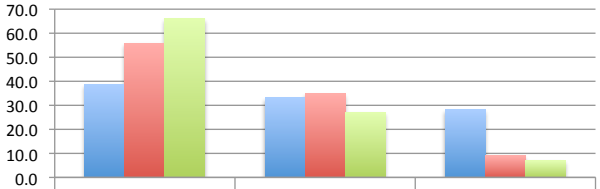
The age distribution is similar for men and women and is characterized by a concentration in the central age group and in the oldest ones, especially for men. The second largest group is defined as unemployed after graduation, a situation that we can probably redefine as "first job seekers". This group represents almost ¼ of total registered men and 1/5 of total registered women. In both cases more than 90 per cent is less than 30 years old. The third most important cause for unemployment is "personal reasons" that accounts for 20.6 of male unemployment and 17.4 for women. Almost ¼ of registered women motivate their situation on the basis of housework. They are concentrated in the age groups normally devoted to the care of young children and to the care of grandchildren.

Table 17 - Urban registered unemployed by sex and reason; 2008

	Retired	Do housework	First time jobseekers	Companies problems	Lost job for personal reasons	Land expropriation	Others
Men	1.6	1.1	24.9	33.6	20.9	4.1	13.6
Women	2.6	23.8	19.4	24.1	17.4	3.1	9.6
Total	2.1	12.9	22.1	28.7	19.1	3.6	11.5

The unemployed with up to compulsory education represent around 50 per cent of the total, those with senior high school weight for one third, and those with university degree for 16.8 per cent On the average the educational level of men is higher than that of women. The percentage of unemployed with at most compulsory education increases with age, while the weight of those with university degree sharply declines with age (Graph 17). The percentage of people with a senior high school degree peaks in the central age group, but has a rather low age variance.

Graph. 17 - China - Urban registered unemployed by main age group and educational level; 2008



	Up to Comp.	SSS	Univ.
16-29	38.6	33.2	28.3
30-49	55.9	34.9	9.2
50+	66.1	27.0	6.9

A comparison between the percentage composition by educational level of urban employed and registered unemployed (Table 18) would suggest that the people with the lowest educational level have the lowest unemployment rate, while senior high school and university graduates would register a much higher level of unemployment. At face value this could also be taken as an indication that the excess labour supply of unskilled labour has been exhausted.

Table 18 - Urban employed and registered unemployed by sex, percentage composition by educational level; 2008

	Up to Comp.	SSS	Univ.
	Employed		
Total	80.4	12.7	6.9
Males	77.9	14.7	7.4
Females	83.3	10.4	6.3
	Registered unemployed		
Total	49.9	33.3	16.8
Males	48.0	33.8	18.2
Females	51.6	32.9	15.5

However, both conclusions are not warranted since educational level does certainly affect the propensity to enroll and only people with an urban resident permit can enroll in the Employment Centers. Moreover, the data on unemployment duration show that the percentage of long term unemployed (more that 12 months of enrollment) declines with educational level both for men and women (table 19). On the average, the percentage of long-term unemployed is higher for women than for men. This appears to be true for all educational levels with the exception of college graduates.

Table 19 - Registered unemployed by sex; percentage of long term unemployed by educational level; 2008

	Men	Women	Total
No Schooling	46.7	47.6	45.7
Primary School	35.9	43.4	40.1
Junior Secondary School	34.1	45.1	40.0
Senior Secondary School	36.7	41.7	39.3
College	28.1	25.7	27.0
University	26.1	27.4	26.7
Graduate and Higher Level	18.2	0.0	12.5
Total	33.9	40.9	37.5

The impact of the limitation to enrollment to urban residents emerges very clearly from the fact that the majority (58.7 per cent) of the people registered at the Employment Centers worked in the service sector, around 40 per cent in the industrial sector and only 5 per cent in agriculture (table 20). The shares of past workers in services and agriculture are higher for women. Almost 40 per cent of unemployed women come from the Sale sector and from the Hotel and Restaurant sector that are characterized by a very high turnover of personal, especially young girls.

Table 20 - Registered unemployed by sex; percentage distribution by previous sector of employment; 2008

	Agriculture	Industry	Services		
			Total	Sales	Hotels and Rest.
Men	4.2	39.1	56.7	16.3	5.9
Women	6.5	33	60.5	28.3	10.5
Total	5.4	35.9	58.7	22.6	8.3

The reliance on the enrollment in the Employment offices as a mean to find a new job is rather low -but not very different from that registered in countries like Italy where the functioning of the Public Employment Centers has received a lot of attention- and does not substantially differ between men and women. Friends and relatives represent the most sought way of looking for jobs. Interestingly, seven per cent of the unemployed hope to start their own business, the percentage being only slightly higher for men than for women.

Table 21- Urban registered unemployed; percentage composition by method of job seeking; 2008

	Register in Employment Agency Office	Ask friends and relatives	Take part in Employment Advertise Meeting	Answer the Wanted ads or Advertise for jobs	Start own business	Others
Men	13.9	52.9	2.1	9.7	8.3	13.1
Women	11.1	51.8	2.1	9.4	6.1	19.5
Total	12.5	52.4	2.1	9.5	7.1	16.4

In conclusion:

- The Labour Force Survey provides estimates of total unemployment that are not reliable and does not publish any information on its structure;

- The information on registered unemployment is not comparable with ILO standards, while the level and structure of registered unemployment are affected by regulations that limit enrollment to urban residents and by the lack of incentives to enroll for numerous socio economic groups.

Data suggest that the use of the Employment centers increases with the educational level and that the duration of unemployment is inversely related to education. As expected, registered unemployed rely more on personal relationships and initiative than in the Employment centers to find a job, while one out of 15 hopes to start its own business.

4.3 Flow analysis

In the previous paragraphs we have analyzed the evolution and structure of the Chinese labour market from a stock perspective. Relevant information can be added using a generational flow approach.

The objective of this approach is to estimate first time entries into employment (labour demand in terms of flow) and, if possible to analyze their structure by sex, age, sector and educational level. Given two geographical areas, it also allows measuring the number of passages from one area to the other, i.e. the migration balance.

The generational flow approach is based on the idea that, in any given time interval, the number of young people that enter the employment area for the first time (labour demand in terms of Flows, LDF) is determined by:

1. The number of people who leave definitely the labour market (Replacement Demand, RD);
2. The number of additional jobs created by the economic system (Additional Demand, AD).

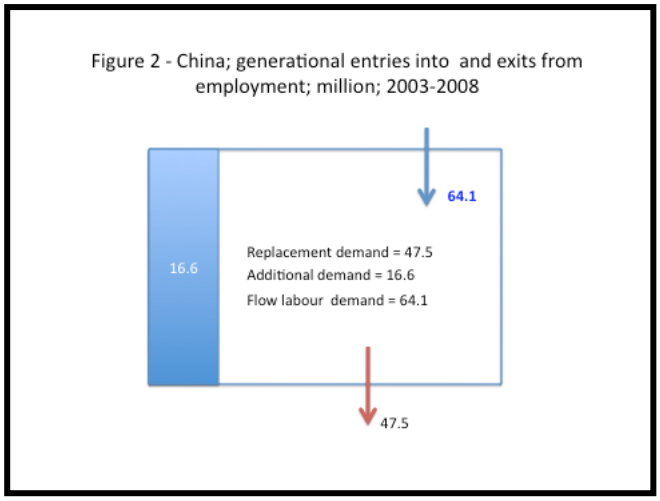
Therefore:

$$LDF_{[t-(t+1)]} = {}_t(RD + AD)_{t+1}$$

RD is always positive, and its size depends mainly on the age structure of the employed, but can be affected by the economic performance and by changes in the legal retirement age; the size of AD depends on the rate of growth of production and the level of technological change. Therefore, AD can be positive or negative. While the level of AD is measured by the increase in employment, RD is computed as the sum of the negative balances registered, in a given interval, by the cohorts of employed[54].

Generational entries and exits – Figure 2 provides a summary view of the generational flows registered by the Chinese labour market between 2003 and 2008. Arrows indicates entries and exits flows, while the colored area represents the number of additional jobs created (or destroyed).

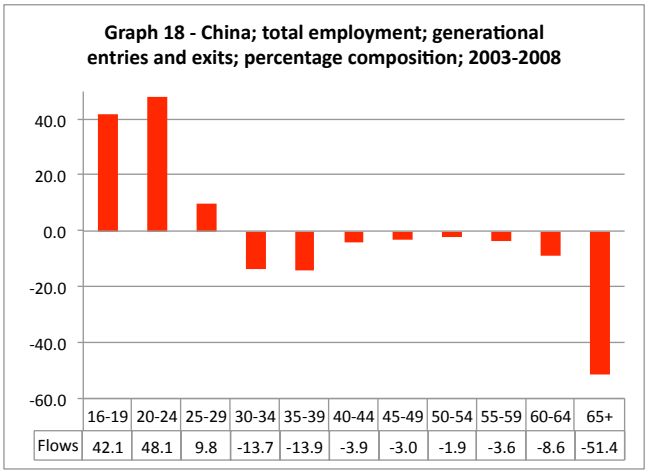
[54] For a more detailed explanation of this approach see M. Bruni,1988 and 2009



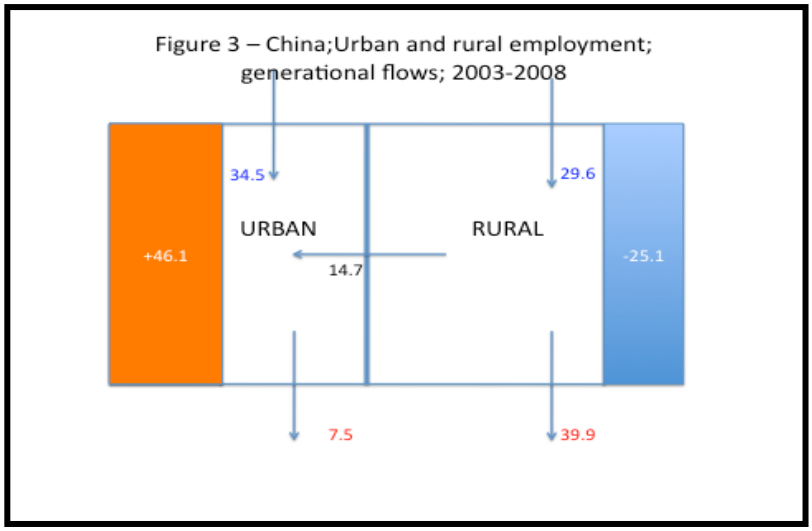
Between 2003 and 2008, 64.1 million young Chinese have entered the labour market for the first time. Twenty six per cent of the generational entries registered in this period are explained by the creation of additional jobs (16.6 million), 74 per cent by the replacement of people who have definitely left the employment area (47.5 million). In other words, every year 12.8 million young people have found a job for the first time, 9.5 million replacing old people that have left definitely the employment area and 3.3 million occupying new additional jobs.

Entries are concentrated in the first two age groups (Graph. 18), accounting respectively for 42.1 per cent and 48.1 per cent. However, almost 10 per cent of first time entrants are aged 25-29. Exits of people 55 years or older represent almost 2/3 of totals exits.

The exits in the central age groups (30-39) are probably accounted for by women migrating to urban areas and leaving the labour market or, most probably, becoming informal labour in the service sector.



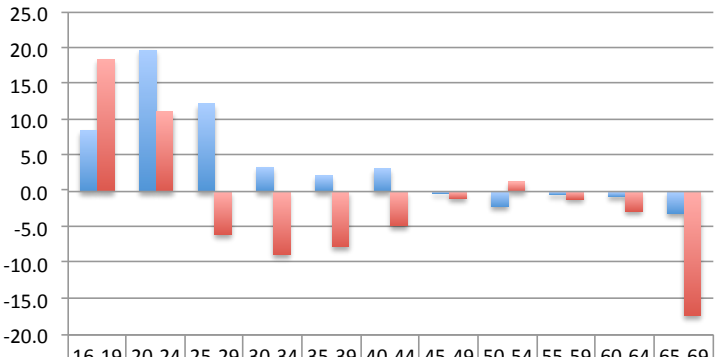
The urban-rural perspective (Figure 3) allows to better understand the complexity of the present situation of the Chinese labour market. The urban labour market (that in 2003 represented 35.1 per cent of total employment) has provided 53.8 per cent of the jobs taken by new entrants (almost 7 million per year). The rural labour market has provided the remaining 6 million jobs positions to first time entrants. Moreover, around 3 million people have moved every year from rural to urban employment, bringing the number of people absorbed by urban areas to an average of 10 million per year.



It must be underlined that definitive exits from urban employment have been equal to 7.5 million. Therefore, 84.7 per cent of total entries in urban employment are due to the creation of additional jobs. In rural areas total exits, including those toward urban areas, have been equal to around 55 million. However, since 25 million jobs were destroyed, only a little less than 30 million young rural people had the possibility to find a job in rural areas.

Urban and rural data show a very different age pattern of entries and exits that do also provide the basis for estimating the movements from rural to urban employment of people aged 25 or more. First time entries in urban employment are concentrated in the first three age groups; entries in rural employment are concentrated in the first two age groups, the first accounting for 62.4 per cent. Therefore, the average age of entry in urban areas is much higher than that in rural areas, the main port of entry being represented by the 20-24 age-group (53.8 per cent), while the 19-24 age group and the 25-29 age group weight respectively 24.6 per cent and 18.2 per cent. This is coherent with the fact that entries in urban employment include a higher proportion of entries in the modern sectors that require a higher educational level. The data by age group allow estimating 14.7 million passages from rural to urban employment that have affected workers between 25 and 44 years of age, the absolute value of each five-year age group decreasing with age.

Graph 19 - Urban and rural employment; generational entries and exits; 2003-2008



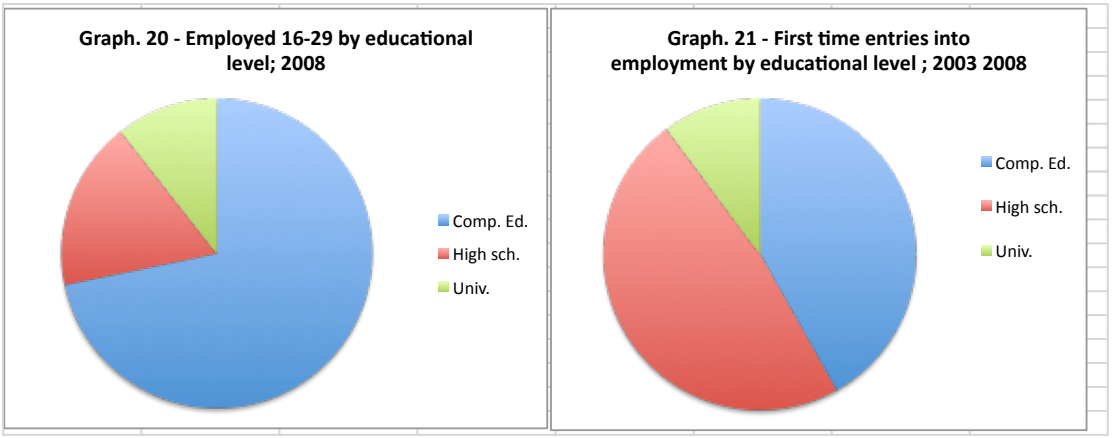
	16-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69
Urban	8.5	19.7	12.2	3.4	2.2	3.2	-0.2	-2.1	-0.4	-0.7	-3.1
Rural	18.5	11.1	-5.9	-8.8	-7.7	-4.8	-1.0	1.4	-1.1	-2.7	-17.3

These migration flows find their explanation in the relative size of entries into WAP and employment in urban and rural areas. Between 2003 and 2008 the number of young

people that have entered Working Age Population at the national level has averaged around 21 million, a number largely sufficient to face a labour demand in terms of flow of 13 million workers per year.

Urban and rural areas present, however, very different situations. In urban areas, entries in WAP have averaged 9 million per year, a value largely insufficient to face a labour demand in terms of flows of 10 million per year. At the same time, WAP entries in rural areas have averaged 12 million per year, an amount far in excess of the six million required by the local labour demand. Rural-urban migration was therefore an unavoidable outcome of a structural lack of labour supply in urban areas and of a structural excess of labour supply in rural areas.

The continuous improvement of China in providing young people with higher educational level and the availability of the market to absorb them is shown by the structure of entries by educational level: 41.9 per cent of first time entrants in employment have up to compulsory education, 47.9 per cent high school and 10.2 per cent university. Although still very far from that of more developed countries, this structure compares very favorably with that of the employed between 16 and 29 and indicates that the educational level of Chinese labour supply in terms of flows is rapidly improving.



4.4 The provincial perspective

Our previous analysis has suggested that the urban-rural divide still maintains some relevance, but its significance is progressively declining. It has also been shown that interprovincial differences not only remain very important, but China is witnessing an increasing demographic and economic diversification at the provincial level. In this paragraph we will try to pursue this line of research with the objective of capturing some elements of the geographical complexity of the Chinese economy through an analysis of the provincial labour markets.

Population by main age groups - The parallel decline in the number of young people and the increase in the number of old people that have characterized China between 2003 and 2008 have been experienced, although with different intensities, by all provinces, with very few and marginal exceptions.

Also the increase in working age population has been a widespread phenomenon. However, 6 provinces have registered a negative trend, the decline being quite dramatic in Anhui, Chongqing and Sichuan (table 22). Therefore the increase in WAP by 52 million is the result of an increase by 62 million in 25 provinces and a decline by 10 million in 6 provinces (Table 22). Moreover, the increase in WAP registered by the ten provinces in which the phenomenon has been more pronounced accounts for 49 million, a value not very different from the national value.

The ranking is lead by the coastal provinces of Guangdong, Zhejiang, Shandong, Jiangsu and Hebei that, as we have already seen, have attracted a very large share of

interprovincial migrants. Guangdong ranks first also by percentage growth (37.6 per cent), followed by the Municipalities of Shanghai (23 per cent), Beijing (22 per cent) and Tianjin (19.9 per cent).

Data do therefore suggest that the Chinese provinces are located in different positions along the demographic transition paths of TP and WAP, and that the "natural" process is largely affected by relevant migration flows and the impact on fertility of the concomitant process of urbanization.

Table 22 - WAP;absolute and percentage change by province; 2003 - 2008

	Abs. change		Percentage change	
1	Guangdong	19,583	Guangdong	37.6
2	Zhejiang	5,059	Shanghai	23.0
3	Shandong	4,564	Beijing	22.0
4	Jiangsu	4,474	Tianjin	19.9
5	Hebei	3,362	Xinjiang	15.3
6	Shanghai	2,831	Zhejiang	14.8
7	Beijing	2,481	Tibet	14.8
8	Yunnan	2,265	Ningxia	12.6
9	Shanxi	2,252	Shanxi	9.6
10	Xinjiang	2,062	Hainan	8.8
11	Shaanxi	1,681	Jiangsu	8.3
12	Henan	1,651	Qinghai	7.9
13	Fujian	1,614	Yunnan	7.5
14	Tianjin	1,522	Shandong	6.8
15	Liaoning	1,323	Hebei	6.7
16	Inner Mongolia	998	Fujian	6.5
17	Jiangxi	906	Shaanxi	6.3
18	Jilin	567	Inner Mongolia	5.6
19	Hubei	526	Liaoning	4.1
20	Gansu	510	Jiangxi	3.0
21	Ningxia	494	Gansu	2.8
22	Hainan	486	Jilin	2.7
23	Heilongjiang	398	Henan	2.4
24	Qinghai	295	Heilongjiang	1.3
25	Tibet	268	Hubei	1.2
26	Guangxi	-241	Guangxi	-0.7
27	Guizhou	-529	Hunan	-2.0
28	Hunan	-974	Guizhou	-2.0
29	Anhui	-1,900	Anhui	-4.2
30	Chongqing	-2,778	Sichuan	-6.2
31	Sichuan	-3,855	Chongqing	-12.3
	Total	51,897		5.6
	Positive values	62,174		
	Negative values	-10,276		

Total employment - From a provincial perspective, the growth in employment by 30.5 million (4.1 per cent) registered between 2003 and 2008 is the result of an increase by 35.7 million in 22 provinces and a decline by 5.2 million in 9 provinces (table 23).

Employment growth has been concentrated in nine provinces and in the Municipality of Beijing that have been responsible for almost 90 per cent of the positive employment balance, while 90 per cent of the decline in employment has been concentrated in four regions.

The rates of employment growth present an extremely wide rage being included between +26.5 per cent of Beijing and –5.7 of Shaanxi. Rates of employment growth higher than the national average have been registered in 14 provinces. They include all the provinces that have given the higher contributions (the only exception being Shandong) plus Tibet, Xinjiang and Hainan, and the two municipalities of Shanghai and Tianjin.

Agricultural employment has decreased in all regions, while employment in industry and services has grown in all regions. These general trends deserve however a much closer analysis.

Table 23 - Total employment by province; absolute change and % change; 2003 - 2008				
	Abs. change		Percentage change	
1	Guangdong	10.9	Beijing	26.5
2	Zhejiang	5.2	Guangdong	23.1
3	Jiangsu	5.1	Zhejiang	15.4
4	Beijing	2.6	Tibet	13.7
5	Fujian	1.9	Jiangsu	12.4
6	Yunnan	1.5	Tianjin	11.0
7	Hubei	1.4	Fujian	9.6
8	Shandong	1.2	Hainan	7.8
9	Jiangxi	1.0	Shanghai	7.5
10	Liaoning	0.9	Yunnan	5.5
11	Sichuan	0.7	Hubei	4.9
12	Shanghai	0.7	Xinjiang	4.4
13	Tianjin	0.5	Liaoning	4.3
14	Chongqing	0.5	Jiangxi	4.3
15	Xinjiang	0.4	Chongqing	2.5
16	Hainan	0.3	Shandong	2.1
17	Tibet	0.2	Inner Mongolia	1.6
18	Inner Mongolia	0.2	Sichuan	1.4
19	Jilin	0.2	Jilin	1.3
20	Guizhou	0.1	Qinghai	0.7
21	Hunan	0.1	Guizhou	0.6
22	Qinghai	0.0	Hunan	0.3
23	Guangxi	0.0	Guangxi	-0.1
24	Shanxi	0.0	Shanxi	-0.3
25	Ningxia	-0.1	Hebei	-0.3
26	Hebei	-0.1	Gansu	-1.4
27	Gansu	-0.2	Henan	-2.4
28	Heilongjiang	-0.9	Anhui	-2.6
29	Anhui	-1.0	Ningxia	-3.2
30	Shaanxi	-1.3	Heilongjiang	-4.7
31	Henan	-1.5	Shaanxi	-5.7
	Total	30.5		4.1
	Pos. Values	35.7		
	Neg. Values	-5.2		

Employment by sector

Agriculture - Between 2003 and 2008, agriculture has lost almost 59 million workers, but with an employment share above 39 per cent remains the sector that provides the largest amount of jobs, a position that is almost certainly going to loose in the next five years. As we have already seen, agricultural employment has declined in every region, but also in this case the large majority of the national decline has been concentrated in a limited number of provinces, the first eleven explaining more than 3/4 of the total (Table 24).

In percentage terms the decline has been above the national average in 13 provinces: they include 9 of those that have provided the greatest contribution to total decline, but also Shanghai, that ranks first (-38.9 per cent), Fujian (-19.8 per cent), Qinghai (-17.2 per cent) and Ningxia (-16.2 per cent).

In 2008, twenty provinces can be classified both as rural and agricultural provinces since they were characterized by a percentage of rural employment and agricultural employment above the national average.

Table 24 - Employment in agriculture by province; absolute change, % change and coefficient of localization; 2008

	Abs. change		% change		Index of localization	
1	Henan	-8.1	Shanghai	-38.1	Yunnan	158.3
2	Shandong	-4.9	Jiangsu	-32.2	Tibet	140.6
3	Jiangsu	-4.6	Zhejiang	-29.3	Guangxi	139.5
4	Sichuan	-4.6	Chongqing	-22.9	Hainan	135.9
5	Anhui	-4.5	Henan	-21.0	Gansu	133.7
6	Hebei	-3.4	Anhui	-20.9	Guizhou	132.4
7	Hunan	-3.1	Fujian	-19.8	Xinjiang	130.4
8	Zhejiang	-3.0	Shandong	-18.8	Inner Mongolia	127.5
9	Guizhou	-2.4	Hubei	-17.9	Hunan	125.3
10	Hubei	-2.4	Hebei	-17.7	Henan	123.3
11	Chongqing	-2.1	Qinghai	-17.2	Shaanxi	118.2
12	Yunnan	-1.8	Sichuan	-16.5	Heilongjiang	117.4
13	Shaanxi	-1.8	Ningxia	-16.3	Sichuan	113.7
14	Jiangxi	-1.8	Guizhou	-16.0	Ningxia	113.4
15	Fujian	-1.7	Shaanxi	-15.6	Jilin	112.9
16	Guangdong	-1.4	Jiangxi	-15.5	Anhui	112.9
17	Guangxi	-1.4	Hunan	-13.4	Qinghai	112.6
18	Heilongjiang	-1.3	Heilongjiang	-13.4	Hebei	103.0
19	Gansu	-1.1	Tianjin	-12.3	Jiangxi	102.8
20	Shanxi	-0.7	Gansu	-11.9	Shanxi	102.6
21	Jilin	-0.6	Jilin	-9.9	Shandong	94.5
22	Liaoning	-0.6	Yunnan	-9.3	Chongqing	93.7
23	Inner Mongolia	-0.4	Beijing	-8.9	Hubei	89.4
24	Shanghai	-0.3	Shanxi	-8.7	Liaoning	84.1
25	Ningxia	-0.3	Guangxi	-8.0	Fujian	78.7
26	Qinghai	-0.3	Guangdong	-8.0	Guangdong	71.6
27	Tianjin	-0.1	Liaoning	-7.4	Jiangsu	52.9
28	Xinjiang	-0.1	Inner Mongolia	-6.3	Zhejiang	46.0
29	Hainan	-0.1	Tibet	-2.9	Tianjin	39.2
30	Beijing	-0.1	Hainan	-2.8	Beijing	14.2
31	Tibet	0.0	Xinjiang	-2.3	Shanghai	13.9
	Total	-58.9	**Total**	-16.1		

Industry - Employment in the industrial sector has grown in all provinces, but Beijing. However, the extraordinary growth in industrial employment that has characterized China between 2003 and 2008 has affected the various Chinese provinces in an extremely different way and its quantitative impact has been concentrated in very few. The five provinces that have registered the highest quantitative increase in industrial employment (Jiangsu, Guangdong, Zhejiang, Henan and Shandong) account for more than 51 per cent of the total employment growth of the sector, and the first ten for 77.5 per cent. Nine of these ten provinces (the exception being Shandong) are also included in the thirteen that have been characterized by an increase in industrial employment above average. The other 4 are Hubei, Chongqing, Yunnan, and Qinghai. The high concentration of the industrial activities in China is clearly shown by the fact that only 9 provinces present an index of specialization above 100. The ranking is lead by Zhejiang and Jiangsu and includes, together with the two municipalities of Shanghai and Tianjin, other four coastal regions: Fujian, Guangdong, Hebei, Shandong and Jiangxi. At the other end of this ranking we find all border regions (Jilin, Heilongjiang, Inner Mongolia, Xinjiang, Tibet, Yunnan, Guangxi, Hainan), and Guizhou, Hunan and Gansu.

Table 25 - Employment in Industry by province; absolute change, % change and coefficient of localization; 2008						
	Absolute change		Percentage change		Index of localization	
1	Jiangsu	6.4	Guangxi	86.2	Zhejiang	170.6
2	Guangdong	6.3	Jiangxi	60.7	Jiangsu	162.9
3	Zhejiang	5.7	Guangdong	47.4	Tianjin	148.7
4	Henan	4.2	Chongqing	45.7	Shanghai	144.2
5	Shandong	3.4	Zhejiang	45.3	Fujian	130.6
6	Anhui	2.9	Jiangsu	45.2	Guangdong	122.7
7	Guangxi	2.8	Yunnan	44.9	Hebei	120.2
8	Sichuan	2.7	Fujian	40.2	Shandong	116.0
9	Jiangxi	2.4	Anhui	38.9	Jiangxi	100.6
10	Fujian	2.3	Hubei	38.0	Anhui	99.2
11	Hubei	2.1	Qinghai	35.5	Henan	98.4
12	Hebei	1.9	Henan	33.6	Chongqing	97.6
13	Hunan	1.8	Sichuan	31.9	Shanxi	96.8
14	Chongqing	1.6	Tibet	30.6	Liaoning	93.5
15	Yunnan	1.1	Hunan	29.0	Ningxia	92.0
16	Shaanxi	0.7	Hainan	23.9	Hubei	90.2
17	Guizhou	0.4	Shandong	23.0	Sichuan	80.4
18	Liaoning	0.4	Guizhou	18.3	Beijing	80.2
19	Jilin	0.3	Shaanxi	18.3	Qinghai	78.2
20	Shanxi	0.3	Hebei	18.1	Shaanxi	76.1
21	Tianjin	0.2	Jilin	15.9	Heilongjiang	75.4
22	Inner Mongolia	0.2	Inner Mongolia	13.0	Guangxi	73.5
23	Qinghai	0.2	Tianjin	12.2	Hunan	73.4
24	Shanghai	0.1	Ningxia	11.6	Jilin	73.1
25	Hainan	0.1	Liaoning	8.2	Inner Mongolia	61.9
26	Xinjiang	0.1	Xinjiang	7.8	Gansu	52.5
27	Ningxia	0.1	Shanxi	7.2	Xinjiang	50.3
28	Gansu	0.1	Gansu	3.5	Yunnan	45.0
29	Tibet	0.0	Shanghai	2.9	Guizhou	41.7
30	Heilongjiang	0.0	Heilongjiang	0.2	Hainan	41.5
31	Beijing	-0.5	Beijing	-15.3	Tibet	38.4
	Total	50.3	**Total**	31.3		

Services - The growth of employment in the service sector has been a little less diversified at the regional level, but almost equally concentrated. In only two regions (Shaanxi and Guangxi) the employment level of the sector has declined. In fourteen the rate of growth has been above the national level, but the absolute growth in these provinces accounts for 87 per cent of the total. If we consider the Index of localization 16 provinces area specialized in services.

Table 26 - Employment in Services by province; absolute change, % change and coefficient of localization; 2008

	Absolute change		% change		Index of localization	
1	Guangdong	6.1	Beijing	54.5	Beijing	218.5
2	Jiangsu	3.3	Tibet	49.6	Shanghai	166.3
3	Beijing	3.2	Yunnan	45.0	Tianjin	132.4
4	Shandong	2.7	Guangdong	37.9	Liaoning	124.2
5	Sichuan	2.6	Guizhou	32.0	Hubei	120.7
6	Zhejiang	2.5	Jiangsu	26.0	Guangdong	115.2
7	Henan	2.3	Hainan	23.2	Chongqing	109.4
8	Yunnan	2.2	Fujian	23.0	Guizhou	109.2
9	Guizhou	2.1	Zhejiang	22.1	Jilin	106.6
10	Hubei	1.7	Tianjin	21.2	Zhejiang	106.5
11	Hunan	1.4	Shanghai	20.4	Hainan	105.3
12	Fujian	1.4	Gansu	18.6	Jiangsu	104.6
13	Hebei	1.3	Shandong	18.4	Xinjiang	104.5
14	Liaoning	1.1	Henan	18.0	Qinghai	102.9
15	Chongqing	1.0	Sichuan	17.6	Tibet	102.1
16	Shanghai	0.9	Hubei	16.4	Fujian	100.3
17	Gansu	0.8	Chongqing	16.3	Sichuan	99.7
18	Anhui	0.6	Qinghai	14.8	Shanxi	99.6
19	Jilin	0.4	Hebei	14.8	Heilongjiang	99.5
20	Tianjin	0.4	Xinjiang	14.8	Gansu	98.9
21	Heilongjiang	0.4	Liaoning	13.6	Inner Mongolia	98.4
22	Xinjiang	0.4	Hunan	13.0	Shaanxi	97.9
23	Inner Mongolia	0.4	Jilin	10.9	Jiangxi	96.2
24	Shanxi	0.3	Ningxia	10.2	Shandong	93.4
25	Jiangxi	0.3	Inner Mongolia	10.1	Hunan	91.6
26	Hainan	0.3	Heilongjiang	7.2	Ningxia	90.6
27	Tibet	0.2	Shanxi	5.9	Anhui	85.3
28	Qinghai	0.1	Anhui	5.8	Hebei	79.8
29	Ningxia	0.1	Jiangxi	4.2	Yunnan	75.6
30	Shaanxi	-0.1	Shaanxi	-1.9	Guangxi	74.7
31	Guangxi	-1.4	Guangxi	-15.6	Henan	73.5
	Total	39	**Total**	17.9		

In conclusion, data show the extreme diversity of the Chinese provincial labour markets. The picture they suggest is that of a country composed by different geographical realities, affected by a process of change that is progressively widening the demographic, economic and social divides that intersect the country. In order to reduce the diversity to a manageable number of cases, we have classified the Chinese provinces on the basis of their economic specialization (table 27).

Eighteen provinces belong to two clearly defined groups. The first includes those provinces that not only are the less developed, but are also loosing ground with respect to the rest of the country; the second the provinces that have been leading the Chinese economic miracle. We have then classified the other 13 provinces in four groups that represent intermediate cases.

A first group of 12 provinces is specialized in agriculture. These provinces represent the agricultural core of China. With the exception of Inner Mongolia, their GDP per capita is below average; moreover in the last five years they had a rate of employment growth below average. However, 5 of them have registered positive, although very modest, inter-provincial migration balances, while registering rural-urban flows.

At the other extreme we have a group of six provinces specialized both in industry and services. They epitomize the successful drive of China toward modernization and house not only the “factory of the world”, but also some of the biggest financial centers of the world and some of the most important cultural institutions of the country. Their GDP per capita is obviously above average; all of them have registered a rate of employment growth above average and in the last 5 years have attracted almost the totality of interprovincial migration. In spite of that, they have already registered relevant labour shortages and the first workers strikes.

Another coastal province, Shandong, is specialized only in the industrial sector, but is also characterized by a relative high incidence of agriculture and services. If the relative lack

of services could be seen as a potential weak point, at the same time Shandong represents an interesting case of an equilibrated productive structure. Its GDP per capita is above average and in the last five years the province had a positive migration balance.

Hebei and Jianxi are in the transition phase from Agriculture to Industry and are still specialized in both types of activity. Although their GDP per capita is below average, both provinces have registered a positive migration balances in the last five years and Jianxi had a rate of employment growth above average.

Table 27 - Priovinces by economic specialization, 2008

		Agriculture	Industry	Services	Rates of Econ. Growth	Migr. Bal.	GDP per cap.
1	Anhui						
2	Gansu						
3	Guangxi						
4	Heilongjiang						
5	Henan						
6	Hunan						
7	Sichuan						
8	Ningxia						
9	Shaanxi						
10	Shanxi						
11	Yunnan						
12	Inner Mongolia						
13	Fujian						
14	Guangdong						
15	Jiangsu						
16	Shanghai						
17	Tianjin						
18	Zhejiang						
19	Shandong						
20	Chongqing						
21	Hubei						
22	Liaoning						
23	Beijing						
24	Hebei						
25	Jiangxi						
26	Hainan						
27	Guizhou						
28	Qinghai						
29	Jilin						
30	Tibet						
31	Xinjiang						

Hainan represents a unique case of a province specialized in agriculture and services, a situation that is obviously explained by the tourist vocation of the island. This has allowed Hainan, whose level of GDP per capita remains rather low, to register an employment growth above average and positive migration balances.

Two regions (Hubei and Liaoning) and two Municipal cities (Beijing and Chongqing) appears to be specialized in Services

Five regions are specialized in Agriculture and Services. This situation is justified, on one side, by their still backward economic situation and, on the other, by the heavy intervention of the central government due to political reasons.

5 Lewis turning point and afterward

The appearance in early 2004 of labour shortages in the coastal regions came as a surprise to economists and observers of the Chinese economy. Since then numerous papers have been devoted to the question whether China has reached the so-called Lewis turning

point[55] at which surplus labour is no longer available and labour supply starts to be upward sloping.

It has been observed that a rising supply curve of labour could have major effects on the Chinese economy: it could "eventually increase consumption, force major appreciation of the real exchange rate (either through currency appreciation or inflation), squeeze profit margins, force industrial upgrading, shift China's export specialization away from labour-intensive products, and raise export prices. China's comparative advantage could be expected to shift to more capital or technology-intensive sectors. This would also induce further global restructuring"[56].

According to some authors[57], the first labour shortages were mainly due to the labour supply being unable to keep pace with demand for a series of contingent reasons: rising food prices had increased income in the countryside and living costs in the cities; insufficient information in emigration provinces; skill or age mismatch; insufficient implementation of the regulation aimed to reduce the discrimination differences between areas. The same authors do however suggest that the more recent labour shortages signal: "the beginning of the end to the 'unlimited' supplies of labour", while "demographic transition implies that China may soon face much more serious supply constraint in the labour market, especially for unskilled workers, in rural as well as urban areas"[58].

This last position has been sustained and documented in a series of papers of the Institute of Population and Labour Economics of CASS. One of the most recent[59] has brought a series of rather conclusive elements in favor of this thesis: average wages for migrant workers have started to rise in 2003 and in 2006 had increased by more than 10 per cent; a survey conducted in almost 2,800 rural villages has indicated that three out of four villages have exhausted their young human resources; finally, a probit analysis based on the data of the 1 per cent 2005 Survey has shown that, assuming unchanged the willingness to participate in urban labour markets and the structure of demand for rural labour, the number of agricultural workers available to work in the modern sector could be estimated at less than 44 million. The authors conclude that since it is possible that economic growth and rural development will modify farmers' behavior and labour demand will switch to people with higher educational levels, the actual size of migration could be smaller than the estimated amount of people willing to migrate.

A different position has been maintained by Ma Li, former director of China Population and Development Research Center and presently counselor to China's Cabinet on population issues[60]. According to Ma Li "China will be able to maintain its development thanks to a sufficient labor supply for at least the next 40 years". Ma added that according to calculations and estimates by the inspector of the migrant population management division under the National Population and Family Planning Commission: "the shortage of the labor force would not appear in the foreseeable long term. … China will see two peaks of labor supply, in 2016 and 2026, with 1 billion working-age people, up from 909 million in 2009. …. By 2050, the number of labor force will be equal to the level of 2020, higher than that of 2009".

5.1 Has China reached the Lewis turning point?

In order to directly assess whether the Chinese labour market has already exhausted or is going to exhaust the excess labour supply previously accumulated, we must clearly distinguish two different issues: the first relates to the presence and size of disguised unemployment; the second to the relevance of such disguised unemployment as a potential

[55] The most vocal supporter of this thesis has been Prof. Cai Fang that has devoted many papers to this subject, some written with his colleagues of the Chinese Academy of Social Sciences.
[56] Garnaut, R. and Huang, Yiping. (2006), p. 19
[57] Garnaut, R. and Huang, Yiping. (2006),
[58] Ibidem
[59] Cai Fang, Yang Du and Meiyan Wang (2009a)
[60] China Daily, 30/03/2010

labour supply for the modern sectors. We must also underline that in so doing we have to consider a time interval since the ageing process contributes to naturally reduce disguised unemployment, especially in a country like China where the process of labour accumulation started 60 years ago and the de-accumulation process, through the labour demand of the modern sectors, 20 years ago. Finally, it is important to realize that migrations are not only related to the presence of surplus labour in rural areas, but more generally to the geographical lack of quantitative and qualitative coherence between the labour supply and the labour demand in terms of flows and are, therefore, the result of the interaction between demographic and economic factors. In substance, the exhaustion of disguised agricultural employment does not necessarily imply the end of phenomena of internal mobility.

Labour productivity in agriculture largely differs at the provincial level, ranging between a maximum of 21.300 RMB in Jiangsu and a minimum of 4.300 RMB in Guizhou; 17 provinces are above the national average of 11.000 RMB, 14 are below. The large provincial spread of labour productivity in agriculture is the result of many factors: land fertility, availability of irrigation, typology of crops, level of mechanization, but it is also the outcome of different rates of disguised unemployment accumulation due, on one side, to the different speed of the demographic transition and, on the other, to the process of de-accumulation caused mainly by internal migration and ageing.

Keeping this in mind, and being therefore totally aware of the limits of the procedure adopted, we have assumed that the maximum labour productivity present in Jiangsu corresponds to a situation in which there is no disguised unemployment, given the level of technology available at present in China. This allows measuring how many workers would be necessary to keep provincial agricultural output constant at that level of labour productivity, and estimate disguised unemployment as the difference between actual employment and productive employment. Under this hypothesis:

- Almost 50 per cent of total agricultural employment (150 million) represents disguised unemployment; in other word if the labour productivity of Jiangsu would become the average productivity in all provinces, 156 million farmers would be sufficient to produce the 2008 output;
- Disguised unemployment is concentrated in few provinces, the first 6 (Henan, Yunnan, Sichuan, Hunan, Anhui and Guizhou) accounting for 50 per cent and the first 11 for 75 per cent of the total.

While the quantitative result of this procedure must be taken with extreme caution, the provincial distribution of the phenomenon is strongly supported by the fact that there is an almost perfect correspondence between the provinces we have defined as “emigration provinces” and the provinces in which there is still the highest amount of disguised unemployment in agriculture.

The next question we have to face is how much disguised unemployment can realistically be considered a potential labour supply for the modern sectors. Age structure and educational level play obviously an important role. Moreover, as we have already underlined, to make this question meaningful we must define a time interval.

In 2008, 37 per cent of agricultural employment in urban areas were 50 years old or more. It is reasonable to assume that at least the same percentage applies also to rural agricultural workers. Under this hypothesis, 114 million agricultural workers were at least 50 in 2008 and other 35 million will reach the age of 50 by 2013. For what relates to educational level, less than 6 per cent of the employed in agriculture have more than compulsory schooling.

Data do therefore suggest that the amount of disguised agricultural unemployed that could represent a potential supply of labour in the next five years amounts to less than 40 million, a value that by en large corresponds to that proposed by of Cai Fang and other members of CASS.

How much of this potential labour supply will transform itself in actual supply, and therefore in migration flows, will depend on factors such as the speed of the mechanization process in agriculture, the income differential between areas of departure and areas of arrival, the structure of labour demand by occupation and educational level.

We can therefore safely conclude that in the next two or three years the labour supply curve is going to become upward sloping.

5.2 Demographic and labour market scenarios: 2008-2023

In the next few years China will cross an historical demographic divide, joining the growing number of countries in which WAP is characterized by a negative natural balance [61].

Table 28 reports our estimates of WAP generational turnover in absence of international and internal migrations, for China as a whole and for urban and rural areas, for the three five-year periods between 2008 and 2023.

Between 2008 and 2013 the natural balance of WAP will remain positive and the Chinese population in working age will increase by 20 million. Starting with the following five-year period, Chinese WAP will start to decline at an average rate of 5 million per year that will become 8 million between 2018 and 2023. The phenomenon will be brought about by a contemporary decline in generational entries (that will decrease from an average value of almost 18 million in the first period to an average value of around 13 in the third period) and increase in generational exits (that will increase from a little less than 14 million to 21.6 million). This trend will affect urban and rural areas that will both still register a positive balance in the first period and negative balances in the following two time intervals.

Table 28 - WAP; generational entries, eixts and total balance by area; 2008-2048

	2008-13	2013-18	2018-23	2008-13	2013-18	2018-23
	5 year values			Yearly averages		
	China					
Gen. Entries	89.1	72.3	66.9	17.8	14.5	13.4
Gen. Exits	69.0	94.6	108.2	13.8	18.9	21.6
Gen. Balance	20.1	-22.3	-41.4	4.0	-4.5	-8.3
	Urban areas					
Gen. Entries	35.0	28.5	26.4	7.0	5.7	5.3
Gen. Exits	28.8	40.6	49.0	5.8	8.1	9.8
Gen. Balance	6.2	-12.1	-22.6	1.2	-2.4	-4.5
	Rural areas					
Gen. Entries	54.2	43.8	40.4	10.8	8.8	8.1
Gen. Exits	40.2	54.0	59.3	8.0	10.8	11.9
Gen. Balance	14.0	-10.2	-18.8	2.8	-2.0	-3.8

From a labour market perspective[62], this implies that between 2008 and 2013 additional labour supply could still be coherent with additional labour demand if:

i) Employment growth would only slightly decline from the 16.6 million of the previous period to 15.3 million;
ii) The total rate of employment would remain constant.

However, this second hypothesis is not very realistic. Between 2003 and 2008 the 16-64 employment rate declined by three percentage points and it is highly plausible that this trend will continue, due to an increase in school attendance and a reduction in female (regular) labour market participation.

Assuming a decline in the employment rate equal to that of the previous five-year period, the 2013 working age population of 987 million could produce only 726 million employed. Therefore, China would have to import 14 million workers in order to keep its employment level constant, and other 7.5 million for every 1 per cent increase in the employment level. If the rate of employment growth would decline to 2 per cent over the 5 year period, the total employment need -generated on one side by the decline in the rate of

[61] See M. Bruni, 2009.
[62] For a detailed discussion of the future demographic trends in China and their implication on labour supply and international migration see M. Bruni 2011.

employment and, on the other, by the increase in the employment level- would be of around 29 million workers.

These considerations do therefore strongly suggest that China will reach the Lewis turning point before 2013. In the following two periods the need of foreign labour will depend on the decline in working age population, the possible decline in the participation rate, the rate of growth in employment. All this strongly suggests that the need for foreign labour will largely increase making China the world biggest importer of foreign labour.

A second point to consider is the concentration of additional jobs in urban areas. As we have already seen, between 2003 and 2008, the growth in employment was concentrated in urban areas that registered an increase of almost 42 million jobs, while employment in rural areas declined by 25 million. At the same time 12 of the 21 million first time entries in WAP took place in rural areas. The result was as a massive migration process from rural to urban areas. It is very probable that this process will continue. Data do however clearly show that WAP will start to decline in urban and rural areas approximately at the same time and the decline will be pronounced in both areas. It is therefore to be expected that in not too far a future China will need workers not only in urban areas but also in rural areas.

6. Conclusions and policies

The previous analysis has shown that the Chinese economy, and therefore the Chinese labour market, are characterized by an increasing complexity and regional differentiation that are the result, on one hand, of the different endowment of human and natural resources and economic vocations and, on the other, of the path of economic development followed by China in the last 20 years.

At its onset the People's Republic of China was an underdeveloped agricultural country. Almost 90 per cent of its population lived of subsistence agriculture in rural areas, and more than one third of its total population was below the age of 15. In its first 40 years, China's total population almost doubled, while its working age population increased by 119 per cent. Although the process of urbanization was quite intense, the rural area absorbed 60 per cent of total population growth and in 1990 still accounted for almost ¾ of the total population. On the meantime, the percentage of working age population had increased to around 67 per cent. Although according to official data, employment expanded at a very fast pace, both in industry and services, 60 per cent of total employment increase was accounted for by the agricultural sector, whose share of total "employment" remained above 60 per cent. In this phase the large majority of young people entering working age was "absorbed" by the agricultural sector, and a large majority could be considered disguised unemployment.

In the last twenty years demographic growth has rapidly declined and, while urban population has increased by 305 million, rural population has declined by 120 million. Progressively smaller generations are entering the path of life, while the large cohorts born during the eighties are now in their prime age. As a result, the share of WAP has reached almost 73 per cent, and a relevant phenomenon of ageing is announced.

In the last 10-15 years, the enormous drive to private industrialization, largely fueled by FDI, has been concentrated mainly on few coastal provinces that offered relative advantages in terms of transport, physical infrastructure and human resources. The vast labour demand generated by this process could not have been faced by local labour supply, but has exploited the large labour surplus present in the rural areas of the same province or of other provinces, mainly those bordering the coastal region. It must be underlined that this phenomenon of mass migration –that did not affect only rural areas and whose dimension has been much bigger than that suggested by the official figures on the floating population- has taken place in the presence of laws and regulations that put all the economic, social and human burden of migration on the shoulder of the migrants.

If evaluated on the basis of national parameters, China is still a developing country. According to the ranking of the World Bank, a GDP per capita of 3,687 USA dollars puts China in the 87th position, while the IMF put China in the 98th place. Moreover provincial GDP per capita presents an extremely high variance. In 2008 it was above average in only ten provinces. Its employment structure, with agriculture still ranking first with 39 per cent and

services lagging behind at 33 per cent, is still very far from a modern structure in which services provide around 60, 65 per cent of total employment and agriculture between 3 and 10 per cent.

A high rate of growth sustained for a long period of time is therefore necessary if China wants to parallel its position of economic power due to its size with a living standard of its population comparable to that of the western world, while a huge restructuring in production and technology will be necessary. Moreover, our analysis has shown that China is faced by very important structural problems.

In the first place a vey unbalanced economic growth at the provincial level not only contradicts the fundamental values of the country, but could represent the premise of a serious threat to its political and social stability, especially where it coincides with ethnic divides.

In the second place, China presents a unique demographic situation. The speed with which the rate of fertility has dropped coupled with an extremely fast growth of labour demand is bringing to an end the phase of unlimited supply of labour. Everything indicates that not only very little excess labour supply is left, but what is left is concentrated far from the areas that will need it. Its availability will therefore require internal long distance migrations.

In the next few years, labour shortages will become more and more evident and widespread creating a strong wage pressure that will affect not only the coastal areas and foreign companies, but could appear in other areas depending on the reallocation of the manufacturing sector in the surrounding provinces. This will be accompanied by a growing awareness by the workers of their possibility to fight not only for higher wages, but also for better working conditions. A phase of labour organization characterized by a greater institutional independence of labour unions is therefore to be expected. This will also necessarily generate a greater articulation of labour contracts and notable changes in industrial relations.

The problem becomes much more serious when we look a little farther in time. At the national level, WAP will start to decline around 2013-2015 and the phenomenon will become massive starting in the middle of the third decade of the century, but it will manifest itself much earlier and in a much more pronounced way in the areas where economic growth is more pronounced.

The fast economic growth sustained by China in the last years has deeply diversified its economic structure and affected its geographic distribution. The result is a much more complex and complicated economic landscape. Up to know the Chinese economic policy has mainly aimed to provide general directives. From now on policies much more detailed, both at sector and geographical level, will be required. It is evident, for instance, that the shortage of labour that will characterize the coastal area and the wage pressure that it will entail, will provoke, on one hand, a possible restructuring of the local manufacturing sector and, on the other, the necessity to define new areas where to locate new economic clusters.

This process will imply, first of all, considerable changes in the way to conceive macro-economic policies and to look at economic planning. Macro-economic policies will need to be detailed at a more local level and be conceived in such a way to foster the interplay between the macro and micro levels and between public intervention and private investment, without forgetting that the market alone cannot reduce territorial economic unbalances and interpersonal income inequalities.

6.1 Labour market policies

For more than 60 years China has been able to generate rates of employment growth in line with those of WAP. In the first 40 years this goal has been achieved also through the accumulation of surplus labour in the agricultural sector, a surplus that in the following 20 years has been a key element in allowing an extraordinary growth of the industrial sector. As we have already underlined, in the next few years this situation will totally change and WAP will start to decline. From a labour market perspective this implies that the number of people entering employment will not be sufficient even to cover those exiting. This will make unavoidable to import labour from other countries if China wants to continue its path toward

economic growth and higher living standards. How much and which typology of labour will be needed will obviously depend on numerous factors, many of which lie outside the scope of this paper. It is however evident that they relate to all the measures that can increase the employment income elasticity of the Chinese economy[63].

At the same time the Chinese labour market is still in its infancy and far from having reached a mature stage. Therefore, before facing this new and in many ways unexpected challenge China should try to adopt all the measures necessary to provide the premises for a well functioning labour market, including regulations providing an explicit link between employment and social protection.

Labour market data and analysis - One of the main evidences that have emerged from this paper is that the available information on the level and structural characteristics of the main labour market variables is, to say the least, scanty and approximate, a problem that is aggravated by the fact that China is composed by provinces that largely differ with regard to their position on the path of the demographic transition, the level of human and economic development, the amount of key physical and immaterial infrastructures.

It is moreover evident that human resources and the functioning of the labour market will play an increasingly relevant role in the choice of the future development path of China, while the Chinese Government will be \ confronted with an increasing necessity of devising complex sets of employment and active labour policies that will have to take into account provincial differences and disparities.

It appears therefore imperative for China to improve its tools for the collection of statistical information and more specifically its Labour Force Survey that need to be brought to a much higher qualitative level. More specifically, while the urban-rural divide is progressively loosing its relevance, the provincial level should assume a central role.

If the collection of data is a responsibility of the Chinese Statistical Bureau, specialized institutions (Labour Market Observatories) should be created with the responsibility to provide timely labour market analyses aimed to support labour policy design and implementation. The dimension and diversity of China would suggest that the most rational solution would be the creation of a network of Provincial Labour Market Observatories (PLMO) coordinated by a National Observatory (NLMO). The NLMO should be in charge of designing a blue print of the Provincial Labour Market Information System (LMIS) that should include all relevant information on demography, labour market, education and vocational training; provide the necessary software and ensure real time connectivity. It would be up to the PLMO to create and update the Provincial LMIS that would then converge to the National Observatory. This will allow the NLMO to develop a comprehensive picture of the National labour market built on a comparative provincial framework and therefore allow the central government to design the general framework of labour policies, while the PLMOs could provide local authorities with the information needed to design, monitor and assess local employment and labour policies.

In the last twenty years economists have concentrated their attention mainly on the macroeconomic and financial aspects of the Chinese economy, while very few papers have been devoted to the development, functioning and shortcomings of the Chinese labour market, paying a marginal attention to the provincial level. If the lack of suitable data can partially explain the phenomenon, it is also true that labour economics and sociology do not have a large space in Chinese universities and with the notable exception of the Researchers of CASS, China has very few specialists working in this area. It is to be hoped that the increasing relevance of the sector will push Chinese Universities to devote more attention to the disciplines connected with the labour market both at the research and training level.

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[63] It is interesting to underline that India will face an opposite problem of creating jobs not only for a large number of new entrants but also for at least a portion of its underemployed and will therefore need to make its development more labour intensive and export labour. In a fanta-economic scenario the two most populated countries in the world could therefore complement each other to in order to satisfy the opposite needs of their labour markets.

Migrants' regularization - Our analysis has shown that the size of internal migration has been much larger than that estimated by the surveys on the floating population and that is characterized by complex patterns that are redesigning the distribution of the population not only between urban centers and the countryside, but also between provinces. Since the main determinants of migration flows belong to the economic sphere (on one side, the research of a permanent job and of a better life and, on the other, the presence of a structural lack of local labour supply in the fast developing coastal areas), it is clear that the great majority of past and future migrants will have no motivation or reasons to go back to their place of departures.

Overall the situation of Chinese internal migrants is vey similar to that of illegal migrants in western societies. Confronted with this situation, western countries had no choice but to proceed to regularize those immigrants that were providing the needed labour force to their economic systems. This solution was made unavoidable not only by ethical reasons, but by the necessity to warranty a regular functioning of the labour market, and avoid the problems generated by the presence of workers that could be exploited in terms of wages and labour conditions. Moreover, the presence of a well functioning labour market normally requires a certain amount of internal mobility that represents the standard way through which the labour market pursues an efficient allocation of the national human resources. In western societies workers can freely migrate from one area to another maintaining the right to enjoy the same social services no matter where they decide to live.

In China the legislation on residence permits has generated a two-tier society, the Chinese population being divided into two components that largely differ in terms of rights and social protection. Moreover, it has been shown that informal urban employment -that represents the most probable outcome of rural migration- implies higher working intensity and relatively lower pay, together with less social protection[64]. It is also true that migrants have to take the less attractive jobs that urban residents refuse to accept.

From this perspective, estimating the future level of the floating population by simply projecting the past levels of this variable does not seem an interesting exercise[65]. In the first place it is highly debatable that the concept of floating population will remain relevant since the functioning of the labour market will necessarily require internal labour mobility to ensure the quantitative and qualitative matching of the demand and supply of labour at the local level. This implies that the legal restriction to internal migration will have to be abolished in order to avoid labour market distortions. In the second place, the real problem is not that of forecasting the number of people that will not be working where they were born, but to devise the necessary policies and instruments to facilitate the matching of the demand and supply of labour, in a situation in which a progressively larger number of areas will be characterized by lack of labour supply, while the excess surplus of labour will tend to be concentrated in a declining number of provinces.

In conclusion, the consequences of the residence permit legislation is a problem that China will have necessarily to confront as soon as possible devising procedures aimed to regularize internal migrants in order not only to avoid distortions and tensions in the labour market, but also to prevent social unrest.

Measures to increase the labour supply and improve its qualitative level – It has been shown that in the next few years not only the excess of labour supply will be completely exhausted, but that China will be faced by a structural lack of labour supply generated by the concomitant effects of demographic and economic factors[66]. On one hand, WAP will start to decline as a consequence of a decrease in entries and an increase in exits, while the rate of participation will decline as a consequence of more and more young people taking part in

[64] Cai Fang, Du Yang and Wang Meiyan, 2009, p. 17.
[65] The Department of Services and Management of Migrant population of National Population and Family Planning Commission of China, 2010.
[66] M. Bruni, 2010.

higher education; on the other hand, the level of employment will have to continue to expand to sustain the economic growth necessary to improve the economic conditions of the Chinese population.

The measures that can increase labour supply are those related mainly to fertility and retirement age, while an increased attention to vocational training and higher education will be required to improve the quality of the labour supply; at the same time the Employment Service system will have to be strengthened to make more efficient the process of skill matching and reduce the cost of internal mobility.

One-child policy - Demographic forecasts show that in order to bring WAP to a situation of natural equilibrium around the middle of the century the number of births forecasted for around 2030 should increase by more than one third[67]. Therefore, at present, the problem is not that of debating if and in which measure the decline in fertility experienced by China in the last three decades has been due to the one child-policy and/or to socio-economic development, but to evaluate if and in which measure its abolition could foster demographic equilibrium. The answer to this question is extremely difficult since the experience of countries that have been affected by a similar phenomenon is that the decline in fertility in a situation of growing average income presents an extremely high inertia. Moreover, it should be remembered that, according to Chinese data on population structure, in the next 20 years the number of women in fertile age will sharply decline. It is however clear that the one-child policy is at present totally unwarranted especially if we keep in mind that the effect of an increase in the number of births would impact on the level of labour supply with a delay of more than 20 years.

Retirement age – In the moment in which China will start to be affected by a lack of labour supply, a possible measure that the Chinese government could consider is the increase in the retirement age. Such measure would represent a coherent response to the increase both in the average age at death, that the Chinese population is presently experiencing, and in the average age of entry in the labour market, due to the longer period of school attendance of the incoming generations. It must however be kept in mind that, from a flow perspective, the impact of such measure would be only that of creating a temporary window during which WAP exits would decline, to then go back to approximately the previous level, after a number of years equal to that of the increase in legal retirement age. However, from a stock perspective, this measure would have the permanent effect of increasing the number of cohorts co-present in the labour market and could therefore counterbalance the probable reduction in the rate of participation of young people[68].

Educational and vocational training - Another way to minimize the structural lack of labour supply is to increase the efficiency in the allocation of human resources. This goal can be pursued, in the first place, by planning and implementing a structure of the entries in vocational courses and higher educational paths coherent with the expected structure of the labour demand in terms of flows by occupation. In a phase in which the Chinese economic development will have to move to production processes based more and more on skilled labour and wages will necessarily increase, the role of vocational training and the capacity to provide a skilled labour supply will become a central element not only for sustaining the development of Chinese enterprises, but also for attracting foreign direct investment. The same is obviously true for higher education. As we have already seen the percentage of young people entering the labour market with a University degree is still very far from that of western countries.

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[67] Ibidem p. 22

[68] Other measures that could increase although in a limited way WAP are new policies aimed to attract young foreigners to Chinese universities and to promote and facilitate the return of Chinese living abroad.

Employment centers and internal mobility - A second fundamental step could be the strengthening of the Employment Service system that no longer meets the needs of an expanding labour market. Such a measure not only is necessary in order to improve skills matching at the local level, but could also greatly facilitate the correct allocation of human resources at the national level minimizing the human and economic costs of internal migration[69]. According to a ADB project, an improved ES system "will reduce the costs of migration, resulting in (i) less time and resources spent on moving and job seeking, (ii) improved opportunities to find better and stable jobs; (iii) improved working conditions and rights protection; and (iv) higher earnings garnered in the longer term, thus improving living standards. At the macro level, strengthened ES will (i) reduce overall transaction costs, (ii) improve the effectiveness of the labor markets, and (iii) enhance sustained economic growth. In substance: "A better ES system will lead to more orderly and effective rural–urban migration, which in turn will contribute to balanced development with less disparity between rural and urban areas and between more affluent coastal and less-developed central and western regions"[70].

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[70] Ibidem

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