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Economic liberalization with rising segmentation on China's urban labor market

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Economic liberalization with rising segmentation on China's urban labor market*

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Abstract

The massive downsizing of the state-owned sector and the concomitant impressive growth of the private sector at the end of the 1990s have altered the nature of the Chinese labor market. By bringing in more competition and market mechanisms, they have contributed to increasing labor turnover and competitiveness in market wages. Using two urban household surveys for 1995 and 2002, this paper analyzes the evolution of labor market segmentation in urban China, by applying an extended version of Oaxaca-Blinder decomposition methods. During the 7-year period, the sharp increase in earnings for all workers however shows substantial differences across ownership, economic sectors, and regions. We find strong evidence of a multi-tiered labor market along these three major lines and highlight increasing segmentation within each of the three dimensions, the gap between the privileged segments of the labor market and the most competitive segments widening over time.

Key words: labor market, earnings differentials, segmentation, China.
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1. Introduction

Since the launching of the policy of reform and opening-up in the late 1970s, both rural and urban labor market conditions in China have changed dramatically. Starting from virtually no labor market, China's move toward a market economy has been accompanied by the emergence of labor markets in both rural and urban areas. Indeed, by allowing market mechanisms to play a greater role in wage-settings and labor mobility to reappear, economic liberalization has revived incentive mechanisms and improved the efficiency of labor allocation across sectors, enterprises and regions¹. Yet, with the continuing enforcement of the *hukou* household registration system that seriously impedes rural-urban migration, rural and urban labor markets still remain highly segmented, with an estimated migrant population in cities of 131 million in 2000 (Li and Bai 2005). Moreover, within both urban and rural labor markets, various rigidities remain and reforms are still uneven and incomplete. In particular, restrictions on labor mobility across sectors and ownership in the urban labor

¹ The labor mobility from agricultural to non-agricultural sectors has been pointed out as a significant source of economic growth in China since the beginning of the reforms (Cai 2005).

market have remained quite strong until the mid-1990s (Knight and Song 1995, Zhao 2002, Chen *et al.* 2005).

Given the incompleteness of the reforms, there is a need to investigate the remaining lines of rigidities and segmentation on the labor market, and to analyze how segmentation has evolved along these lines over the recent years. Labor market segmentation arises when labor market is made up of several segments with distinct rules for wage determination and a limited mobility of labor between segments. The issue of segmentation is also often related to that of efficiency, as illustrated by the literature on the public-private earnings gap in developing countries or economies in transition (Adamchik and Bedi 2000, Boeri and Terell 2002, Falaris 2004, Lokshin and Jovanovic 2003). In China, where the so-called “iron rice bowl” of lifetime employment with the associated welfare state has been dominating for years before it was completely dismantled in 1994 (Knight and Song 2005), the issue of the public sector efficiency may be of special importance.

Moreover, policy-related rationales for studying labor market segmentation issues are also related to income inequality (Meng and Zhang 2001). Indeed, a multi-tiered labor market in which wages are not only determined by skill differentials, but also by different institutional arrangements may have strong implications in terms of both labor allocation across sectors and income distribution among workers. In the case of China, Zhao (2002) and Chen *et al.* (2005) found that the payment of high non-wage benefits in state-owned enterprises prevented labor from moving out of the state sector in the mid 1990s. Moreover, Knight and Song (2003) point out labor market segmentation as a potential source of growing income inequality in urban China.

Urban employment in China has increased from 95 million in 1978 to 265 million in 2004, but from the mid-1990s onward, the employment situation in most cities started to deteriorate, with the number of jobs not increasing as fast as the labor force, and thus leading to rising unemployment in urban areas². Although the official registered unemployment rate in urban areas stands at 4.2 percent (8.27 million people in 2004), actual unemployment is estimated to be much more severe, especially when unemployment in the form of *xiagang* is considered (Lai 2005). As stated in the recent China Human Development Report (Li and Bai 2005), the exact number of laid-off workers remains largely unknown, but estimates provided

² Except as otherwise indicated, all macroeconomic data on employment in China are official data from the National Bureau of Statistics (NBS).

by the National Bureau of Statistics indicate that there would have been 70 to 80 million workers laid off between 1998 and 2002 from public and non-public enterprises³.

Observed changes in urban employment in China come from the conjunction of changes in various dimensions. Overall, the basic patterns that have emerged are related to enterprise ownership, sector and regional location. First, urban unemployment mainly comes from urban state-owned industrial enterprises. While total employment in urban areas has continuously increased over the years, employment in state-owned units has steadily decreased since the mid-1990s, with a particularly sharp decrease in 1998, from 112.6 million in 1995 down to 70 million in 2004. The reduction of employment in state-owned and collectively-owned units has been partly compensated by the increase of employment in the private sector, the foreign sector and new enterprises ownership types⁴.

The second important change is that the sharp decrease in employment mainly took place in the most competitive sectors, such as manufacturing, where the number of employed people dropped by 15% between 1995 and 2002⁵. In contrast, sectors with a state monopoly status such as banking and insurance and real estate increased their employment level by respectively 23% and 48% over the same period. Third, the regional distribution of urban employment and unemployment is also quite uneven. North-east provinces, which have been among the hardest hit provinces by the layoff policy, are those that have experienced the sharpest drop in urban employment between 1995 and 2002 (-28%). In other regions, except the western region which share of total urban employment increased from 18% to 21%, the employment level has basically remained the same.

Over the last decade, a growing number of works have studied changes in China's wage structure. Recently, the larger availability of nation-wide household surveys has allowed for deeper statistical analyses of the issue, focusing on various complementary aspects. A main area of research analyzes various aspects of labor market segmentation in China, by focusing on earnings gaps between different groups of workers: rural migrants and urban residents (Knight *et al.* 1999, Meng and Zhang 2001, Maurer-Fazio and Dinh 2004),

³ The sum of laid-off workers at the beginning of 1998 with laid-off workers newly added during the period from 1998 to 2002 amounts to 27 million (NBS 2003, p. 134). According to Li and Bai (2005), the number of workers laid-off from other types of enterprises would be roughly 50 million. Within state-owned enterprises, the laid-off policy has been largely implemented in small-scale enterprises owned by local governments and suffering from financial losses (Dong 2003).

⁴ These include shareholding corporations, limited liability corporations, cooperative units, etc.

⁵ Again, these changes are to be related with the laid-off policy, which has been mainly implemented in industries facing strong competition, such as manufacturing and construction. For instance, the number of on-post staff and workers in state-owned enterprises in manufacture fell sharply from 33.3 million in 1995 to 9.8 million in 2002 (NBS 2003, p. 23).

men and women either in rural China (Meng and Miller 1995, Meng 1998, Ho *et al.* 2002, Rozelle *et al.* 2002, Dong *et al.* 2004) or in urban China (Qian 1996, Gustafsson and Li 2000, Liu *et al.* 2000, Hughes and Maurer-Fazio 2002, Maurer-Fazio and Hughes 2002, Liu *et al.* 2004, Bishop *et al.* 2005, Démurger *et al.* 2005, Ng 2005) and workers in enterprises of different ownership (Zhao 2001, 2002, Dong and Bowles 2002, Chen *et al.* 2005).

This paper tries to provide further evidence for the various dimensions of labor market segmentation in urban China by focusing on earnings differences within three different dimensions: enterprises' ownership, economic sector and regional location. We use an original dataset derived from two urban household surveys conducted by the Chinese Academy of Social Sciences (CASS), which provide detailed information on labor income as well as on individual and household characteristics for urban *hukou* holders in 1995 and 2002. To assess the extent of labor market segmentation, we first estimate Mincerian earnings equations for each category of enterprises (defined by ownership, sector or location) and then propose an extended form of Oaxaca-Blinder decomposition methodology to decompose for each dimension the observed earnings differentials in 1995 and in 2002 into three components: the distribution of individual characteristics, differences in working time and what can be interpreted as a pure "segment effect". Comparisons of segmentation magnitudes across ownership, sector and region, and between the two years are expected to provide a broader view on recent changes across the various segments of the Chinese urban labor market.

2. Major reforms in China's urban labor market

The major pattern of labor market reforms over the last 25 years is the gradual shift from a planned allocation of labor to state-sector jobs and wage grids based on seniority into a more open labor market and more flexible wage settings. Two main periods can be distinguished in this gradual evolution (Table 1). First, the 1980s have witnessed slow changes, although some important reforms have been introduced: increased managerial autonomy concerning wage setting rules, introduction of labor contracts (and non-permanent employment) and increased freedom in the selection of employees. From the 1990s, and more strongly from the mid-1990s onwards, changes in the labor market have accelerated, pushed ahead by four major evolutions: *i*) the development of the private sector (including foreign-

invested enterprises), *ii*) the privatization of small and medium SOEs (from 1994 onwards⁶), *iii*) the restructuring of SOEs (from 1997 onwards), with massive lay-offs and the consecutive increase in unemployment and decrease in participation rates⁷, and *iv*) the loosening of population movement control within the *hukou* system.

During the pre-reform period, there was virtually no labor market in China. Job allocation and wage-settings in state-owned enterprises (SOEs) were determined within the central plan and a key function held by SOEs was to provide employment to the entire working-age population. The main features of this centrally-determined wage structure were the following⁸. First, the wage determination system was characterized by rigidity with low level wages and a distribution of wages based on an egalitarian principle. Promotion and wage increases were mostly driven by seniority. Second, SOEs were not only labor providers, but they also provided a number of social welfare benefits, including housing, medical care, pensions, etc., which aimed at compensating for low base wages. Third, with the employment assignment system and the strictly controlled movement of the population within the *hukou* system, labor mobility across sectors and regions was strongly limited.

Economic reforms launched from the end of the 1970s led to important changes within the state sector. In a first step, more autonomy in decision-making for employment and wages has been granted to SOEs managers, who started to be allowed to retain a share of their profit and use it to give bonus wages to their employees. Bonus wages aimed at providing incentives to employees and at increasing the overall productivity of SOEs. Their amount was also meant to reflect both enterprise and individual performances (Coady and Wang 2000, Meng 2000). However, given high supervision costs, bonuses have often been distributed on an egalitarian basis within work units, and the evaluation of their impact remains controversial.

To accelerate changes in the structure of ownership, industrial reforms also encouraged the emergence of a new private sector, composed of domestic private enterprises⁹, individual enterprises (*getihu*), domestic joint-ventures (*lianying qiye*), foreign-

⁶ The policy of privatizing small and medium SOEs while protecting larger enterprises is known as the *zhuada fangxiao* (“seizing the large and letting go the small”).

⁷ As stated by Giles *et al.* (2006), the objective of this policy was “to shut down unprofitable enterprises, diversify ownership, shift enterprises to modern forms of corporate governance, and de-link the provision of social services from individual employers by privatizing housing and shifting responsibility for health insurance and pension provision to city or provincial governments” (p. 63).

⁸ A detailed description of the pre-reform wage-setting system is given in Meng (2000, chapter 2). See also Lin *et al.* (2001) and Knight and Song (2005).

⁹ In 1988, the State Council issued the *Tentative Stipulations on Private Enterprises* (TSPE) to govern the registration and management of private firms. This document defined a private firm as “a for-profit organization

invested enterprises, and share-holding companies (*gufenzhi qiye*). The share of the non-public sector in employment grew steadily from zero in 1978 to 17% in 1995, 45% in 2002 and 53% in 2004. Although domestic private enterprises suffered from restricting policies such as overtax, strict regulation, limited access to loans and skilled employees in the 1980s, the entire private sector (including foreign enterprises) became a leading engine of reforms and introduced market forces into the Chinese economy. In particular, the Company Law promulgated in November 1993, provided the legal framework for the development of limited liability companies and shareholding companies. Out of the central plan, these enterprises independently determine their employment policies and wage scales, and their behavior is mostly driven by profit-maximization objectives.

Starting from the mid-1990s, other important changes have taken place on the Chinese urban labor market, the most radical being the laid-off policy (*xiagang*) implemented in state-owned and urban collective enterprises, first in Shanghai only in 1993 and then over the country in 1997. Given the growing burden of substantial redundant labor in the state sector, the goal of this policy was to lay off a quarter or more of its workers within 4 years (1997–2000) (Appleton *et al.* 2002). This policy has had a strong impact on employment in the public sector, falling from 112.6 million in 1995 to 71.6 million in 2002 in state-owned enterprises and from 31.5 million to 11.2 million in urban collective enterprises.

The second most important change is the wage reform launched in 1994 and implemented gradually later on. More autonomy in setting wages and bonuses has been granted to enterprises, and profitability has increasingly become a major factor in the evolution of both wage levels and wage differentials among urban enterprises (Knight and Li 2005). As a consequence, the average wage in the state-owned sector has increased substantially, especially in the government sector. Between 1998 and 2002, average earnings in state-owned units have grown by 107% in real terms, with an annual growth rate of 10.9%. But the wage reform has also widened the earnings gap between workers and managers, between skilled workers and unskilled workers, as well as between enterprises making profits and those making losses. During the last two years of Zhu Rongji's administration, salaries in

that is owned by individuals and employs more than eight people.” Firms that hired eight employees or less can be registered as individual enterprises (*getihu*). The TSPE identified three types of private firms: those under sole ownership, partnerships, and limited liability companies.

the government sector were raised again by 60%, in order to narrow the income gap between civil servants and white-collars employed in the non-public sector.¹⁰

The last major change on the Chinese urban labor market over 1995-2002 is related to rural-urban migration. The policy of city governments for rural migration is mixed and varies from one city to another, but the general trend is that employment policies concerning rural migrants was tight at the end of the 1990s and started to loosen at the beginning of the new century¹¹. The participation of rural migrants in the urban labor market has had a great impact on wage levels and unemployment among employees with urban *hukou*. Rural-urban migrant laborers are more competitive than local urban workers for unskilled jobs, which presses down the wage level for unskilled workers on the urban labor market, particularly for those whose wage setting is the most strongly related to market mechanisms (Cai 2005, Li and Bai 2005).

3. A first look at the data

3.1. Data

The data used in this paper come from two nationally representative household income surveys conducted in early 1996 and 2003 for the reference periods of 1995 and 2002. The surveys are part of the China Household Income Project (CHIP) coordinated by the Institute of Economics, Chinese Academy of Social Sciences, with assistance from the National Bureau of Statistics (NBS).¹² Household samples were drawn from the large sample used by the NBS.¹³ The two urban surveys cover the same provinces and cities, and almost the same number of households.¹⁴ Although the number of samples in each province is not exactly proportional to its actual population, the two figures are highly correlated, more households being selected from more populated provinces. The 1995 urban data include

¹⁰ The second objective of this wage adjustment was to stimulate sluggish economic growth. However, while the relative wage in the government sector rose significantly, the macroeconomic effect of the wage adjustment remained quite limited.

¹¹ In 1998, the Ministry of Public Security issued new regulations relaxing control over *hukou* registration. In particular, those who join their parents, spouses and children in cities can now be registered with urban *hukou* (Cai and Wang 2003).

¹² The China Household Income Project is an internationally joint research project established in 1987, and sponsored by the Institute of Economics, Chinese Academy of Social Sciences, the Asian Development Bank and the Ford Foundation. Additional support was provided by the East Asian Institute, Columbia University (Riskin, Zhao and Li 2000). Up to now, three household income surveys have been conducted, with a first round for 1988, a second round for 1995 and a third round for 2002. The output of the project based on the first two surveys can be found in Griffin and Zhao (1993) and Riskin, Zhao and Li (2001).

¹³ The sampling method of NBS is briefly explained in NBS 2002, p.318.

¹⁴ The eleven provinces included in the urban survey are: Anhui, Beijing, Gansu, Guangdong, Henan, Hubei, Jiangsu, Liaoning, Shanxi, Sichuan and Yunnan.

6,931 households and 21,694 individuals and the 2002 urban data 6,835 households and 20,632 individuals. The distribution of households among provinces can be found in Table 2.

To maintain consistency of collected information in the two surveys, most questions raised in the 1995 survey have been incorporated in the 2002 survey, which also includes new questions corresponding to socio-economic and structural changes that have occurred between the two surveys. This allows for consistency over explanatory variables in our analysis for the two years.

The two urban surveys only cover urban *hukou* holders and thus exclude a potentially important segment of the urban labor market: the rural-urban migrants. In a changing environment where rural-urban migration is taking momentum, considering only local people might be somehow misleading. We acknowledge this potential shortcoming of our study which does not allow for the evaluation of how migration is affecting the urban labor market and wage differentials.

Our sample is restricted to individuals aged 16 to 60 who declared working at least part of the year and earning (positive) wages. Owners of private or individual enterprises are not considered here since wages cannot be disentangled from profit in their case. Laid-off workers are also excluded, which leaves us with a sample of 10,898 employees in 1995 and 9,537 employees in 2002.

The earnings variable is defined as the sum of cash labor compensations and income in kind. Cash labor compensations include the basic salary as well as bonuses, allowances (except those given while “waiting for a job”, *xiagang*) and subsidies (including housing, medical, child care and regional subsidies), other wages (including overtime wages and wages for special circumstances), and other income from work unit (except hardship allowances). Hence, our earnings variable includes some non-monetary benefits (e.g. housing, medical care, child care and regional subsidies), although it does not fully account for all fringe benefits provided by the public sector (such as implicit contribution to pensions, health insurance, or preferential housing rents). Finally, hourly earnings are defined as the ratio between earnings and the number of declared hours worked in a year.

An important component of earnings differentials in China may lie on differences in living standards between different cities. To account at least partially for this factor, earnings are adjusted for provincial purchasing power differences, by using Brandt and Holz (2005) urban provincial-level spatial price deflators (the reference being nationwide prices in 2002). In the analysis presented below, earnings are thus expressed in “inter-provincial purchasing power parity”, which we believe can be considered as more comparable than non-deflated

data usually considered in the literature. Among the different implications of using this purchasing power parity adjustment, it is worth mentioning that it leads to a reduction in earnings differentials between some regions as compared to the official NBS *China Statistical Yearbooks* data¹⁵. It is especially the case for the comparison between municipalities and other regions, since the cost of living in municipalities is much higher.

Our focus being on the evolution of earnings differentials in various components of the labor market, we consider three different dimensions, namely ownership, economic sector and geographical location, for each of which, we define several categories.

Five categories of enterprise ownership are considered: state-owned enterprises (SOEs), urban collective enterprises (UCEs), private enterprises (PIEs), foreign-invested enterprises (FIEs) and government agencies or institutions (GAIs). In the course of the reforms implemented over the period under study, new categories of enterprises have emerged, notably share-holding corporations (both from the state and others). Given these changes, state-owned enterprises include state-owned enterprises at central or provincial level, local publicly-owned enterprises, and for 2002, state share-holding companies. Private enterprises comprise private or individual enterprises, and for 2002, other share-holding companies.

Economic sectors are categorized according to their openness to competition and are grouped into four categories: competitive sectors, oligopolistic sectors, public services and government agencies. Competitive sectors are composed of manufacturing, construction, commerce and trade, and food services. Oligopolistic sectors comprise real estate, public utilities, and finance and insurance. Real estate¹⁶ can be considered as “oligopolistic” for at least two reasons. First, there are huge structural barriers to entry in this sector, since it requires a large amount of investment. Second, access to land in China is quite closely related to relationship with the government at any level, which adds to the oligopolistic nature of the real estate sector. Both public utilities and finance and insurance can be considered as oligopolistic sectors because they were not or hardly open to the private sector in 2002. The third economic sector considered here (“public services”) includes health care, sport and social welfare, education, culture and arts, and scientific research. We separate public

¹⁵ See Démurger et al. (2006) for an evaluation of the impact of using deflators on measures of spatial inequality.

¹⁶ There is some inconsistency for the definition of “real estate” between 1995 and 2002. Indeed, in 1995, “real estate” also includes “social services” (such as law companies, housekeepers, reemployment centers, etc.) while in 2002, they are split into two separate categories. We chose not to add-up these two categories for 2002 since social services are mostly competitive. However, we believe that the bias of including social services into real estate in 1995 should not be too large since this sector was still marginal in 1995.

services from government agencies in the sector dimension because they are different in terms of wage settings. Indeed, while government agencies' wages are paid only by the government, public services can get additional funding from the market, which may substantially affect wage settings behaviors. Last, some economic sectors could not be clearly put into one or the other category as defined above. This is the case for mining, geological prospecting and irrigation administration, for transportation, storage, post office and communication and for social services. We thus chose not to include these sectors in the sector dimension analysis and to limit the number of economic sectors to "non-ambiguous sectors" in terms of competition or oligopoly situation.

The third dimension analyzed is the regional location for which we consider five regions: coast, centre, west, north-east and metropolises. As the household income surveys do not cover all Chinese provinces, the five regions are represented by a sub-sample of provinces as follows. Beijing is representative of province-level metropolitan cities; Guangdong and Jiangsu are representatives of coastal provinces; Henan, Anhui, Hubei and Shanxi are representatives of central provinces, Gansu, Sichuan and Yunnan are representatives of western provinces, and Liaoning is representative of north-eastern provinces.¹⁷

Ideally, we would like to consider the three dimensions highlighted above simultaneously since they are obviously correlated. Among the most prominent correlations, Table 3 shows that *i*) oligopolistic sectors are mostly composed of state-owned enterprises (SOEs) and government agencies or institutions (GAIs), *ii*) private and foreign enterprises are mainly found in the competitive sector as well as in the coastal region, and *iii*) SOEs are over-represented in the North-East region. However, for practical reasons, it is not possible to consider the three dimensions together. Since the methodology requires the estimation of earnings equations by sub-categories, if we were to consider each sub-category (e.g. state-owned enterprises in competitive sector in coastal region) we would have too few observations. Consequently, in the following analysis, the three dimensions will be analyzed separately, though keeping in mind that they are overlapping.

¹⁷ For our purpose, it is more appropriate to consider Liaoning's characteristics as representative of a fifth category of provinces, namely north-eastern provinces rather than of coastal provinces. Indeed, Liaoning province is quite different from coastal provinces in terms of industrial and ownership structure. Its industrial structure is strongly influenced by strategic choices that have been made during the central planning period, with a predominance of heavy industry sectors, and thus central SOEs. Moreover, it has been one of the most badly hit provinces by the laid-off policy from the end of the 1990s, which has had strong implications in terms of employment structure.

The main characteristics of employees by dimension and over time are shown in Table 4. A first general comment on the evolution between 1995 and 2002 is that both average age and education level have increased over time, while the share of long-term contracts has sharply decreased from 96% to below 80%.

Comparisons by ownership show that government agencies and foreign-invested enterprises employ better educated workers than other sectors in 1995 and in 2002. As compared with private and foreign sectors, workers in the public sector are older and more often party members, with long-term tenure, but they are much less predominantly located in coastal provinces. It is noteworthy that the most educated workers are found in public administration, with an average number of years of education (above 12) much higher than in any other type of enterprise for the two years. Finally, the regional distribution of the private sector has equalized over time, which may reflect the development of the private sector at the turn of the century all over China, including inland provinces.

As for differences by sectors, employees in the competitive sector tend to be less educated (especially in 2002), less party members, have less long-term contracts in 2002, and are much less likely to be working in state-owned enterprises. Consistent with the ownership dimension, we can observe that it is in public services and in government agencies that the level of education is the highest.

Finally, regional differences show that workers in municipalities tend to have much better characteristics than in other regions in terms of education, experience (higher age) and party membership (for 1995). On the contrary, workers in coastal provinces tend to be both less educated and less party members (with a lower share of SOEs), which may be consistent with the non-skilled labor intensive outward-oriented light industrial structure of these provinces. Some changes over time also deserve attention, especially for the North-east region. Indeed, the downsizing of the state-owned sector has been particularly strong between 1995 and 2002 in this region, where the share of SOEs dropped to reach the lowest level in 2002 (63%). Moreover, at the same time, the share of employees with long-term contracts has also dropped in this region, from the highest in 1995 (nearly 98%) to the lowest in 2002 (64%).

3.2 The evolution of earnings differentials by categories

Descriptive statistics on earnings differentials and earnings composition across the three dimensions are given in Table 5. During the 7-year period from 1995 to 2002, total earnings have increased by 78%, with quite important differences across ownership (varying

from a 56% increase to a 103% increase) and sectors (52% to 111% increase), and to a lesser extent, regions (69% to 81% increase). As a result, earnings differentials across enterprises of different ownership and of different sectors have changed a lot and sometimes induced a re-scaling of average earnings provided by the various enterprises.

In terms of ownership, two categories have seen their position dramatically improving or deteriorating as compared to other enterprises. On the one hand, government agencies and institutions have gained a lot, with a doubling in earnings. This huge increase resulted in a changing sign of the observed earnings differential with foreign-invested enterprises in 2002. Hence, while foreign-invested enterprises were providing the highest total earnings in 1995, the huge earnings increase in government agencies and institutions moved them up to the first rank with wages similar to foreign-invested enterprises in 2002¹⁸. On the other hand, urban collective enterprises as well as private and individual enterprises have seen their relative position deteriorating, the largest gap with other enterprises jumping from respectively 67% to 78% and 57% to 64% between 1995 and 2002.

In terms of economic sectors, the difference between the competitive and the non-competitive sectors (oligopolistic, public services and government) has turned larger over time, with the earnings gap in favor of non-competitive sectors increasing from 10%-17% to 48%-63%. A somehow similar change, with much lower amplitude though, has also taken place across non competitive sectors, with the largest gap between two non competitive sectors increasing from 6% in 1995 to 10% in 2002.

Furthermore, coefficients of variation on total earnings indicate a more equal distribution of earnings in the public sector (state-owned enterprises and government agencies or institutions / public services and government) as compared to the private / competitive sectors for both years. The earnings composition has also changed over time, the most notable change being the sharp reduction in the share of subsidies provided by state-owned enterprises (which comes from a 50% reduction of the absolute amount in SOEs). As a consequence, while in 1995, the public sector was offering much higher subsidies than the private sector, it is no longer the case in 2002, except in public administration¹⁹.

In terms of regional differences, although China is now characterized by significant income disparity among different regions and provinces, it has not always been the case, especially in the earlier stage of economic reform. At that time, the central government was

¹⁸ The observed difference in 2002 is not statistically significant.

¹⁹ In 1995, there were still some institutional limitations on wage settings. This can be clearly seen from basic wages, which were quite similar across different sectors, the main determinants of earnings differences being income outside basic wage.

playing a key role in the process of wage determination and income distribution across regions. As a result, the earnings difference between coastal provinces and inner provinces was extremely small.²⁰ With the decentralization of the wage management system in urban areas from the mid 1980s, regional earnings differences have increased remarkably. By the end of the 1980s, average earnings in the coastal region overtook the western region and have taken the lead in earnings rise since then. As indicated in Knight *et al.* (2001), a significant divergence in earnings growth across provinces in urban areas arose between 1988 and 1995. The data used in this paper indicate that although no further divergence across the different geographical regions can be observed between 1995 and 2002 when earnings are adjusted by regional living costs, regional earnings differences nevertheless remain at a high level. Hence, the relative difference between coastal provinces and central and western provinces slightly reduced over the period, but the premium offered by the former still stands at 37% with central provinces and 28% with western provinces. Moreover, the comparison between municipalities and other regions shows that taking account of differences in living costs sharply lowers the premium in favor of municipalities, especially compared with coastal provinces for which the gap is reversed and very small (1% in 1995, 5% in 2002).

Lastly, the comparison of the number of hours worked per week shows a longer working time in the private sector than in the public sector for the two years, despite a reduction in the number of hours worked in both private or individual enterprises and foreign-invested enterprises in 2002. The comparison across economic sectors confirms that workers in public services and in government agencies work less, but it also shows that working time in the competitive sector has increased over time while it has decreased in the oligopolistic sector, leading to a quite important gap between competitive and non-competitive sectors in 2002 (about 4 hours per week). Regional comparisons do not reveal strong differences in working time across regions, except for a sizeable reduction in hours worked in municipalities between 1995 and 2002, which is not observed in other regions.

4. Methodology

In order to analyze earnings differentials between individuals belonging to different segments in the labor market (across ownership, sector, or region), we use an extended

²⁰ At the beginning of economic reforms, average earnings in the western region were even higher than that in the coastal region. For instance, in 1978, it was respectively 696 yuan in the eight western provinces (Sichuan, Guizhou, Yunnan, Shaanxi, Gansu, Qinghai, Ningxia and Xinjiang) and 666 yuan in the eight coastal provinces (Tianjin, Liaoning, Shanghai, Jiangsu, Zhejiang, Fujian, Shandong, Guangdong) (NBS 1999, p. 139).

version of Oaxaca-Blinder decompositions (Blinder 1973, Oaxaca 1973) to evaluate the contribution of three complementary factors: differences in mean endowments of workers across segments, differences in hours worked, and a pure “segment effect”. These decompositions provide an evaluation of the magnitude as well as of the evolution of segmentation phenomena.

4.1. *Modeling total earnings*

Let w_s^i represent hourly earnings for individual i belonging to segment s . w_s^i depends on two sets of arguments: individual characteristics (x_s^i), and a set of segment specific parameters corresponding to the earnings model linking individual characteristics with observed earnings (β_s). The hourly earnings generating process can thus be expressed as a function W of these two sets of arguments:

$$w_s^i = W(x_s^i; \beta_s) \quad (1)$$

Symmetrically, let h_s^i represent the number of hours worked by individual i belonging to segment s . h_s^i also depends on two sets of arguments: individual and household characteristics determining labor supply (z_s^i), and a set of segment specific parameters (γ_s). The number of hours worked in segment s can thus be expressed as the following function H :

$$h_s^i = H(z_s^i; \gamma_s) \quad (2)$$

Following (1) and (2), total individual income (I) derived from segment s can be expressed as:

$$\begin{aligned} I_s^i &= w_s^i \cdot h_s^i \\ &= W(x_s^i; \beta_s) \cdot H(z_s^i; \gamma_s) \end{aligned} \quad (3)$$

4.2. *Decomposition of observed earnings differentials*

Using equation (3), the observed average earnings gap between two segments s and S can be decomposed as follows:

$$\begin{aligned}
\bar{I}_S^i - \bar{I}_s^i &= \bar{W}(x_s^i; \beta_s) \cdot \bar{H}(z_s^i; \gamma_s) - \bar{W}(x_s^i; \beta_s) \cdot \bar{H}(z_s^i; \gamma_s) \\
&= \bar{W}(x_s^i; \beta_s) \cdot \bar{H}(z_s^i; \gamma_s) - \bar{W}(x_s^i; \beta_s) \cdot \bar{H}(z_s^i; \gamma_s) \quad : \text{Difference in endowments} \\
&\quad + \bar{W}(x_s^i; \beta_s) \cdot \bar{H}(z_s^i; \gamma_s) - \bar{W}(x_s^i; \beta_s) \cdot \bar{H}(z_s^i; \gamma_s) \quad : \text{Difference in hours worked} \\
&\quad + \bar{W}(x_s^i; \beta_s) \cdot \bar{H}(z_s^i; \gamma_s) - \bar{W}(x_s^i; \beta_s) \cdot \bar{H}(z_s^i; \gamma_s) \quad : \text{"Segment effect"}
\end{aligned} \tag{4}$$

This decomposition provides an evaluation of what would be the observed average earnings gap under the following conditions:

i) If workers observed in different categories were facing the same remuneration and hours worked conditions \Rightarrow pure difference-in-endowments effect.

ii) If workers observed in different categories were facing the same remuneration conditions and were endowed with the same characteristics \Rightarrow pure difference-in-hours worked effect.

iii) If workers observed in different categories were facing the same hours worked conditions and were endowed with the same characteristics \Rightarrow pure “segment effect”.

4.3. Implementation and robustness issues

The practical implementation of the method consists in three phases. First, earnings equations and hours worked equations are estimated separately for each segment (see Appendix). Second, estimated coefficients are used to predict hourly earnings and hours worked for each individual and each segment. Third, each of the effects presented in equation (4) is evaluated by averaging over individuals the corresponding observed or counter-factual earnings values.

4.3.1. Earnings equations

Decomposition results presented below correspond to the specification for earnings equation estimations detailed in Appendix A and B. Common explanatory variables for hourly earnings functions to the three analyses are the following: effective number of years of education, a dummy variable if the individual has received vocational education, effective years of work experience and square, a dummy variable for “big cities” and a dummy variable for acquisition of the current urban residence permit (*hukou*). Regional dummies are used as additional explanatory variables in the ownership and sector dimensions.

Selectivity bias in enterprise type and industrial sector choices may affect estimated coefficients from earnings equations and thus decomposition results. In the absence of any fully exogenous instrument in the data, we chose to stick to results obtained without

selection bias correction. However, it should be stressed that, although labor has been administratively allocated in China up to 1995 and labor mobility remained quite low until this date, selection may definitely be a more important issue in 2002 from both supply and demand sides. Indeed, on one hand, the development of labor market has allowed mobility to increase and on the other hand, SOE restructuring has led to a selective laying-off of workers. Our dynamic interpretations in terms of segmentation changes might thus be partly driven by selection mechanisms. However, our decomposition findings are robust to changes in both specification and estimation methods.²¹

4. 3. 2. *Decomposition: path-dependence*

A general issue concerning Oaxaca-Blinder decompositions concerns path-dependence (Fournier 2005). Indeed, evaluated effects *a priori* depend on the benchmark population structure or coefficient vector chosen to run micro-simulations. In the following, each possible evaluation is considered and used as a robustness test for our decomposition results²². Moreover, since decomposition results obtained from this type of analyses strongly depend on estimation quality, a bootstrap procedure has been implemented over the whole procedure (estimation, simulation and decomposition). The following decomposition tables include the corresponding 95% confidence intervals.

5. **Decomposing the evolution of earnings differentials by categories**

Table 6 documents the changes in relative remunerations across enterprises of different ownership/sector/region in urban China, by applying the extended Oaxaca-Blinder decomposition method presented above. The table presents the estimated mean effect of differences in endowments, differences in hours worked, and differences in ownership/sector/region on the observed earnings differential between enterprises. Differentials are reported both in mean value and in percentage of the lowest earnings, the stars indicating the statistical significance of estimated effects.

²¹ In particular, results obtained through the two-step method proposed by Dubin and McFadden (1984), with sector choice and enterprise choice modeled as multinomial Logit and local shares of employment in various sectors used as instruments, lead to similar results for all aspects considered in this paper.

²² Each effect can be evaluated in six different ways, depending on the choice of reference populations and coefficient vectors as well as on the choice of the sequence in which different effects are evaluated.

5.1. Ownership structure

As indicated in the first column of Table 6.1, observed earnings differences across enterprises of different ownership show a general increasing trend between 1995 and 2002, the only (noteworthy) exception being between foreign-invested enterprises (FIEs) and government agencies and institutions (GAIs) for which the gap vanished over time. The evolution has been in favor of both FIEs and GAIs, and at the expense of urban collective enterprises (UCEs). In the middle, state-owned enterprises (SOEs) have seen their earnings gap increasing compared to UCEs, but their situation has deteriorated compared to GAIs. Turning to decomposition results, the most striking result from Table 6.1 is the growing importance (and significance) of segmentation as the most prominent explanatory factor for the general increasing trend in earnings differences across ownership.

Earnings differentials in favor of the foreign sector in 1995 have increased over time compared to the emerging domestic private sector, but decreased compared to the public sector. The most dramatic change concerns the gap with GAIs, which has vanished from 22% in favor of FIEs in 1995 to a low and non significant 2% in favor of GAIs. The deteriorating position of FIEs as compared to GAIs mainly comes from changing segmentation patterns, although a higher working time in FIEs gives them a premium over GAIs. Compared to SOEs, the slight decrease in earnings differential comes from two concomitant forces: converging characteristics on one hand, and decreasing segmentation in favor of FIEs on the other hand. A stronger segmentation in favor of FIEs can be found when compared to UCEs and PIEs. The earnings gap between FIEs and UCEs comes from the conjunction of a strong and increasing segmentation, better (although slightly converging) characteristics and a longer (also reducing) working time in FIEs. For the comparison with private and individual enterprises (PIEs), figures for 1995 must be taken with caution since estimations do not perform very well for this year, the number of observations in this particular category being very small (see Appendices A1 and B1). However, it is instructive to examine earnings differentials in 2002. The comparison with FIEs shows a very strong segmentation: the premium in favor of FIEs would be 78% in 2002 if there were no differences in characteristics and hours worked with PIEs. However, longer working time in PIEs reduces the gap by 21 percentage points on average.

In 1995, the earnings differential between the public sector and urban collectives was all in favor of the former (27% for SOEs and 37% for GAIs), and was explained by the conjunction of both better endowments of workers in the public sector and a rather strong segmentation against urban collectives. Interestingly, the huge increase in the earnings gap

between GAIs and UCEs over time (reaching 78% in 2002) can be attributed to a much stronger segmentation but also, and rather importantly, to a widening gap in terms of workers endowments, with an increase of the wage premium due to better characteristics from 9% to 18%. On the opposite, changes in hours worked are reducing the gap in 2002 between UCEs and both SOEs and GAIs, but with a quite small impact (respectively 3% and 6%). In 2002, the comparison between PIEs and the public sector also shows very high earnings differentials against PIEs, the premium in favor of the public sector ranging from 31% to 61%. Again, these gaps are driven by a very strong segmentation phenomenon, which can not be compensated by longer hours worked in the private sector (though this last effect is quite high and significant).

The decomposition analysis presented here highlights three main phenomena on the ownership dimension, which are of importance to understand the evolution of the labor market in urban China. First, workers in the public sector, especially government agencies and institutions, are still very much privileged as compared to other segments of the labor market. Second, the foreign sector has reinforced its position through a sustained high wage policy. Third, the emerging domestic private sector and the collective sector have seen their relative position deteriorating. These results show that despite the increasing importance of market mechanisms within the private sector, active policies launched at the end of the 1990s to raise government wages have had a strong impact in terms of segmentation, which confirms that earnings in the public sector remain highly protected. It should be stressed that there might also be a sizeable selection effect at stake here since the downsizing of the state sector has led to the privatization of the least dynamic enterprises, the Chinese authorities still controlling large profit-making SOEs where employees remain strongly protected.

5. 2. *Economic sectors*

Similarly to the ownership dimension, decomposition results by economic sectors presented in Table 6.2 highlight a quite strong and rising segmentation between competitive and protected sectors, which drives observed earnings differences. Indeed, in 1995, segmentation against the competitive sector contributed to more than half of the total average earnings differences. In 2002, the main reason why the competitive sector provided much lower wages than the rest of the sectors (between 48% and 62%) almost exclusively comes from the segmentation effect, which is strongly reinforced as compared to 1995, and ranges from 50% to 64%.

By the end of the 1990s, SOEs began to retreat from the competitive sector, while strengthening their position in non-competitive sectors, especially in the oligopolistic sector. SOEs downsizing and massive lay-offs are the main reasons for the surge in unemployment at the end of 1990s, but our decompositions indicate no change in terms of the relative wage level for the remaining employees in the oligopolistic sector. The comparison between the competitive sector and the oligopolistic sector even reveals no significant differences in workers' characteristics, the only determinant explaining the large difference being the segmentation effect.

These findings can be analyzed in terms of profit sharing within oligopolistic sectors (Li and Bai, 2005; Knight and Li, 2005). Moreover, institutional explanations lie in the increased autonomy in wage settings and increased wages for civil servants provided by the Chinese government over the period. This has allowed the oligopolistic sector and public services to further redistribute rents to employees, while the competitive sector has been facing growing competition.

Not only the wage level, but also working hours have changed under the pressure of competition. During the period, working time has increased in the competitive sectors while at the same time, the non-competitive sectors somewhat reduced their working hours. Given this differentiated evolution, changes in hours worked are partly hiding the magnitude of the evolution. Indeed, if workers in the competitive sector were not working longer, the observed differences of 48% to 63% would be even larger by 8 to 10 percentage points. Hence, if there was no segmentation and only differences in the hours worked, the earnings level for similar workers in competitive sectors would be higher than the oligopolistic sectors, and quite close to public services and government jobs.

Within the non-competitive sector, observed earnings differences also turned larger in 2002. For both years, endowments in the oligopolistic sector are slightly lower than in the other two sectors. This is especially the case for public services, in which endowments are significantly higher than in the oligopolistic sector and drive a major part of the observed earnings gap. On the opposite, public services show small endowment differences with the government sector, but benefit from a favorable segmentation effect, which turned even larger in 2002. This somewhat surprising segmentation phenomenon may be explained by the fact that in public services, wages are derived partly from the government, and partly from the market. The marketization of this sector has allowed workers in public services to get rising extra wage income (bonus, subsidy, etc.) on top of wages provided by the government.

The sector decomposition confirms and completes some of the findings from the ownership analysis, with a rising segmentation over 1995-2002 in favor of the non-competitive sectors. Three facts can be highlighted here to explain observed earnings differences and evolutions over the period studied: *i*) increasing competition within the competitive sector, *ii*) increasing concentration of large SOEs within oligopolistic sectors, and *iii*) increasing protection of government jobs.

5.3. Regional segmentation

Consistently with the other two dimensions, regional decompositions show a general trend of rising segmentation over time although observed earnings differentials have been slightly decreasing. Regional disparities, especially between coastal provinces and other regions remain large, the highest gap being still close to 40% in 2002. A sizeable part of the observed earnings gap between regions can be attributed to a more rapid economic growth and huge capital inflow in the coastal region on one hand, and to inadequate labor mobility between regions on the other hand. As illustrated in many studies (e.g. Knight and Yueh 2006), labor mobility is still very limited for urban local workers subject to various institutional obstacles even at the end of 1990s, while regional mobility among rural migrant workers increased over time.

Labor immobility has had a major impact on the segmentation of the emerging labor market in urban China. Our decomposition results show that segmentation effects account for a major part of observed earnings differences in most pairs of regions both in 1995 and 2002. As indicated in Table 6.3, the share of regional differences resulting from segmentation, particularly between coastal region and other regions, is remarkably large in the two years. Hence, 89 percent of the observed earnings difference between coastal and central region, 97 percent between coastal and western region, and 134 percent between coastal and north-east region, were due to segmentation effects in 1995. Seven years later, the corresponding figures are 110 percent, 98 percent and 127 percent.

Moreover, while the observed earnings differentials decreased slightly between 1995 and 2002, the segmentation effects became even stronger in almost each pair of regions. As shown in Table 6.3, the segmentation effect increased from 35% in 1995 to 41% in 2002 between the coastal and central region and from 11% in 1995 to 18% in 2002 between the coastal region and Beijing. The same rise in segmentation also happened between the western and central region, between municipalities and the central region and between municipalities and north-east region.

A remarkable change between 1995 and 2002 concerns the central region against which the segmentation effect has increased. The deteriorating relative position of central provinces may be rooted in the fact that the region has been disregarded in the strategy of regional development of the central government. This is reflected in the growing discontent and complains coming into view among officials in central provinces, who criticize the regional development policy of the central government ignoring the central region. However, despite declining relative earnings and increasing segmentation against workers in the region, central provinces have improved their relative position in terms of endowment in 2002. This may be due to the fact that, since demand for skilled workers decreased owing to SOEs closing-down, skilled and well-educated laid-off workers had to take jobs that were previously filled with unskilled and poorly educated workers. Hence, a selection process may have taken place so that better endowed people remained active while low-endowed people were eventually forced to exit the labor market. Moreover, it seems that less laid-off workers moved out of their province of origin in central provinces than in North-eastern provinces (e.g. Liaoning) because there were more opportunities to find jobs within the city or within the province.

In contrast with central provinces, the position of the western region in terms of segmentation has somewhat improved between 1995 and 2002. Indeed, the fraction of observed earnings differentials attributed to segmentation effects decreased between the western region and other regions. This finding is consistent with the interpretation that the Western Development Strategy has raised the relative level of earnings in western provinces. Hence, this active policy aimed at developing western provinces, seems to have been effective in that it allowed western provinces to maintain their relative position with respect to coastal provinces (30 % earnings gap) in a context of growing regional segmentation.

Finally, north-eastern provinces, represented by Liaoning, deserve special attention. The relative earnings in the north-east region slightly decreased compared to other regions except municipalities over the period of 1995-2002, which is reflected in rising observed earnings gaps between the north-east region and other regions. Concerning segmentation phenomena, the evidence is mixed with stable segmentation in favor of coastal provinces, western provinces and municipalities on one hand, and decreasing segmentation in favor of central provinces on the other hand. This pattern can be at least partly explained by a declining endowment effect against the north-east region due to selection mechanisms. With SOEs restructuring leading to massive lay-offs and closures of some large scale enterprises, which left no local re-employment opportunity, better educated employees such as

professionals, technician and skilled workers have often chosen to move out to other provinces. Figure 1 illustrates this point by displaying the changes in the number of laid-off workers in state-owned enterprises in Liaoning in comparison with some of the central provinces between 1998 and 2002. Hence, the number of laid-off workers declined sharply in Liaoning during 2000-2002, although total employment only slightly increased. This can be explained by the rising number of emigrating workers. On the contrary, there was almost no change in central provinces.

Regional decompositions provide further evidence of rising segmentation on China's urban labor market and complement the other two dimensions by highlighting quite large regional disparities and the unequal distribution of gains or burdens related to changes in the labor market at the turn of the century. They also stress the importance of the Chinese government's regional policies in alleviating burdens in some regions (e.g. western provinces) and redistributing the benefits of economic development. In this context, central provinces appear to be by far the greatest (relative) loser in the recent reform process, facing increasing segmentation, even as compared to western and north-eastern provinces.

6. Conclusion

This paper analyzes the evolution of labor market segmentation for urban *hukou* holders between 1995 and 2002. During the 7-year period, earnings in urban China have increased sharply (+78%) and for all workers, with however substantial differences across ownership and sectors, and to a lesser extent, regions. As a result, earnings differentials across enterprises have changed dramatically and sometimes induced a re-ranking.

Our decomposition results show strong evidence of a multi-tiered labor market along three major lines, segmentation arising across enterprise ownership (up to 78%), economic sectors (up to 64%) and regions (up to 41%). They also highlight increasing segmentation over time within each of these three dimensions. In particular, the gap between the privileged segments of the labor market (e.g. SOEs and oligopolistic sectors) and the most competitive segments (e.g. private enterprises and competitive sectors) has widened between 1995 and 2002. Over a longer and more recent time-period, our results thus confirm Knight and Song (2003) findings that "the market forces operating in the growing private sector and the relative immunity of the state sector from those forces generated greater wage segmentation among types of ownership [between 1995 and 1999], and provincial differences in the pace

of reform and in economic growth created spatial segmentation in wages that could not be removed by the equilibrating movement of labor” (p. 616).

In the view of the massive lay-offs in the state-owned sector at the end of the 1990s and the concomitant impressive growth of the private sector, one might have expected segmentation not to increase so sharply given the growing importance of market mechanisms and competition in the urban labor market. However, the clear distinction found between a “protected” well-paying segment and a “competitive” segment mostly made of the emerging private sector stresses a strongly segmented labor market in 2002. More specifically, our findings suggest that there are two directions towards which the urban labor market in China is moving. On one hand, there is no doubt that the marketization of labor allocation and wage determination is taking momentum with the process of reforms in the whole economy. Hence, economic liberalization has brought various benefits to the labor system, including better signals for a more efficient allocation of labor and improved incentives for efforts thanks to enhanced rewards to effort. On the other hand, various institutional as well as market-based elements have precluded from equating marginal products, and thus reducing earnings differences. Major explanations for the strong and rising magnitude of segmentation over 1995-2002 can thus be found in migration restrictions and in active government policies towards the public sector, but also certainly in efficiency-wage related behaviors in the foreign sector.

The observed increasing spatial segmentation reflects the still extremely low mobility of labor among urban dwellers, which certainly represents a major obstacle to the formation of competitive market wages in urban areas. Even though regional mobility for rural-urban migrant workers increased over time and the effectiveness of institutional barriers such as the *hukou* system has progressively declined, various institutional obstacles remained to labor mobility for urban residents even at the end of the 1990s. As a result, market mechanisms favoring wages convergence could not operate properly. The evidence found here falls in the line of Knight and Song (2005) findings of a “three tier” labor market in 1999, made of “privileged” urban residents never made redundant during the SOEs downsizing process, retrenched urban workers and rural-urban migrants. The upper segment consists here in employees in the public sector and/or the oligopolistic sectors, while the second segment is consistent with a more competitive private sector characterized by short-term contracts and by downward pressures on wages from the third segment composed of rural-urban migrants. As mentioned above, our empirical analysis is only based on data collected for urban *hukou* holders, *i.e.* local urban residents. As a consequence, it does not encompass the whole labor

market in cities where huge inflows of rural-urban migrants are potentially key components of the urban labor market. Despite this shortcoming, our decompositions confirm that in 2002 the Chinese urban labor market was still in a transition stage.

Moreover, contrary to European economies in transition, which have been found to offer a wage premium in favor of the private sector after economic liberalization (Adamchick and Bedi 2000, Lokshin and Jovanovic 2003), our results highlight earnings differences in favor of the public sector in China after controlling for workers' characteristics and working time. Hence, even during the most recent period, the Chinese government has kept its influence on the urban labor market through wage income increases for civil servants and by maintaining the relative income of workers in SOEs, as well as by targeting specific provinces. Compared to European economies in transition, the Chinese government has taken active policies through wage adjustments to narrow the income gap between civil servants and white-collars employed in the non-public sector and thus keep skilled workers in the public sector. In this respect, the observed segmentation structure may help relieving difficulties for the public sector to retain skilled workers, as well as reducing incentives for moonlighting and thus compromising the overall efficiency of the public sector, all difficulties that have been observed in Poland or Yugoslavia (Adamchick and Bedi 2000, Lokshin and Jovanovic 2003).

Furthermore, the existence of segments with different wage-setting behaviors in the labor market may also be interpreted in terms of efficiency wage theory, especially for the comparison between foreign-invested enterprises and domestic (public and private) enterprises, and to some extent between coastal provinces and other regions. In this line of thought, higher earnings received in foreign-invested enterprises may be interpreted as means to facilitate workers' cooperation, to boost their effort-intensity, and more generally, to improve the average quality of job applicants. Since foreign-invested enterprises in China face greater difficulties in employee supervision due to language barriers and cultural differences, they may be willing to pay wages above market rates to solve part of these difficulties and to protect their investment in employees' screening, hiring and training. Following this approach, economic liberalization and growing marketisation may be consistent with the payment of wages exceeding a pure competitive level.

If these two last points may provide some economic rationale to high and even rising segmentation, increasing segmentation associated to a non-uniform move of enterprises towards the payment of competitive market wages may yield further sources of income inequality. Indeed, evidence shows that during the 7-year period, the structure of wages has

become more unequal.²³ As highlighted by Khan and Riskin (2005), the concentration ratio for urban wages increased by 68 percent between 1995 and 2002. Our results confirm this trend and the potential perverted effects of a multi-tiered urban labor market on income inequality.

Finally, there are good reasons to believe that the observed increasing segmentation may be only a temporary phenomenon. Indeed, given the process of SOEs downsizing, ownership structure may lose importance in the long run. At the same time, the growing importance of the private sector might be expected to put more pressure on the urban labor market in the future by bringing in stronger competition and challenging the privileged situation of employees in the public and oligopolistic sectors. Similarly, population movements across provinces and regions are also on the rise and may in the long run re-balance regional disparities.

References

Adamchick, Vera A., and Arjun S. Bedi. 2000. Wage differentials between the public and the private sectors: Evidence from an economy in transition. *Labour Economics* 7(2): 203-24.

Appleton, Simon, John Knight, Lina Song, and Qingjie Xia. 2002. Labor retrenchment in China: Determinants and consequences. *China Economic Review* 13(2-3):252-275.

Bishop, John A., Feijun Luo and Fang Wang. 2005. Economic transition, gender bias, and the distribution of earnings in China, *Economics of Transition* 13(2):239-259.

Blinder, Alan S. 1973. Wage Discrimination: Reduced Form and Structural Estimates. *Journal of Human Resources* 8(4): 436-55.

Boeri, Tito and Katherine Terell. 2002. Institutional Determinants of Labor Reallocation in Transition. *Journal of Economic Perspectives* 16(1): 51-76.

Brandt, Loren, and Carsten A. Holz. 2005. Spatial Price Differences in China: Estimates and Implications. Available at <http://ihome.ust.hk/~socholz/SpatialDeflators.html>. Forthcoming in *Economic Development and Cultural Change*.

Cai, Fang. 2005. Reform of Labor Policy in China: A Perspective of Political Economy. In *CHINA: An Economics Research Study Series – Volume 4: Reforming China*, edited by the Institute of World Economics and Politics, Chinese Academy of Social Sciences. Singapore: Marshall Cavendish Academic.

²³ However, Khan and Riskin (2005) and Démurger *et al.* (2006) have shown that urban household disposable income inequality has been slightly but significantly decreasing over the period.

- Cai, Fang and Wang Dewen. 2003. Migration as marketization: What can we learn from China's 2000 census data? *The China Review* 3(2):73-93.
- Chen, Yi, Sylvie Démurger, and Martin Fournier. 2005. Earnings differentials and ownership structure in Chinese enterprises. *Economic Development and Cultural Change* 53(4):933-958.
- Coady, David P., and Limin Wang. 2000. Equity, efficiency, and labor-market reforms in urban China: the impact of bonus wages on the distribution of earnings. *China Economic Review* 11(3):213-231.
- Démurger, Sylvie, Martin Fournier and Yi Chen. 2005. The Evolution of Gender Earnings Gaps and Discrimination in Urban China: 1988-1995. HIEBS *Working paper 1116*. Hong Kong: The University of Hong Kong.
- Démurger, Sylvie, Martin Fournier and Li Shi. 2005. Economic liberalization and the public-private earnings gap in urban China. Working paper.
- Démurger, Sylvie, Martin Fournier and Li Shi. 2006. Urban income inequality in China revisited (1988-2002). Forthcoming in *Economics Letters*.
- Dong, Xiao-yuan. 2003. China's urban labor market adjustment: a summary of literature review. Available at <http://info.worldbank.org/etools/docs/library/74068/china/readings/oct28/dong28engl.pdf>.
- Dong, Xiao-yuan, and Paul Bowles. 2002. Segmentation and discrimination in China's emerging industrial labor market. *China Economic Review* 13(2-3):170-196.
- Dong, Xiao-yuan, Fiona MacPhail, Paul Bowles, and Samuel P. S. Ho. 2004. Gender Segmentation at Work in China's Privatized Rural Industry: Some Evidence from Shandong and Jiangsu. *World Development* 32(6):979-998.
- Dubin, Jeffrey A., and Daniel L. McFadden. 1984. An econometric analysis of residential electric appliance holdings and consumption. *Econometrica* 52(2): 345-362.
- Falaris, Evangelos M. 2004. Private and public sector wages in Bulgaria. *Journal of Comparative Economics* 32(1): 56-72.
- Fleisher Belton, M., and Dennis. T. Yang. 2003. Labor laws and regulations in China. *China Economic Review* 14(4):426-433.
- Fournier, Martin. 2005. Exploiting Information from Path Dependency in Oaxaca-Blinder Decomposition Procedures. *Applied Economics Letters* 12(11):669-672.
- Giles, John, Albert Park, and Fang Cai. 2006. How has Economic Restructuring Affected China's Urban Workers? *China Quarterly* 185:61-95.
- Griffin, Keith, and Zhao Renwei. 1993. *The Distribution of Income in China*. London: Macmillan.

- Gustafsson, Björn, and Li Shi. 2000. Economic transformation and the gender earnings gap in urban China. *Journal of Population Economics* 13(2):305-329.
- Hausman, Jerry. 1978. Specification Tests in Econometrics. *Econometrica* 46: 1251-1271.
- Knight, John, and Li Shi. 2004. Wages, Firm Profitability and Labor Market Segmentation in Urban China. *China Economic Review* 16(3): 205-28.
- Hughes, James, and Margaret Maurer-Fazio, 2002. Effects of Marriage, Education and Occupation on the Female/Male Wage Gap in China. *Pacific Economic Review* 7(1):137-156.
- Ho, Samuel P. S., Xiaoyuan Dong, Paul Bowles and Fiona MacPhail, 2002. Privatization and enterprise wage structures during transition: Evidence from rural industry in China. *Economics of Transition* 10(3): 659-688.
- Khan, Azizur R., and Carl Riskin, 2005. China's household income and its distribution, 1995 and 2002. *The China Quarterly* 182:356-384.
- Knight, John, and Li Shi. 2005. Wages, Firm Profitability and Labor Market Segmentation in Urban China. *China Economic Review* 16(3):205-228.
- Knight, John, Li Shi and Zhao Renwei. 2001. A Spatial Analysis of Wages and Incomes in Urban China: Divergent Means, Convergent Inequality. In *China's Retreat from Equality: Income Distribution and Economic Transition*, edited by Carl Riskin, Zhao Renwei and Li Shi. New York: M.E. Sharpe.
- Knight, John, and Lina Song. 1995. Towards a labor market in China. *Oxford Review of Economic Policy* 11(4):97-117.
- . 2003. Increasing urban wage inequality in China: Extent, elements and evaluation. *Economics of Transition* 11(4):597-619.
- . 2005. *Towards a Labour Market in China*. Oxford: Oxford University Press.
- Knight, John, Lina Song, H. Jia. 1999. Chinese Rural Migrants in Urban Enterprises: Three Perspectives. In *The Workers' State Meets the Market: Labor in China's Transition*, edited by Sarah Cook and Margaret Maurer-Fazio. London: Frank Cass.
- Knight, John and Linda Yueh. 2006. Job Mobility of Residents and Migrants in Urban China. In *Unemployment, Inequality and Poverty in Urban China*, edited by Li Shi and Hiroshi Sato. London: RoutledgeCurzon.
- Lai, Pingyao. 2005. China's Economic Growth: New Trends and Implications. In *CHINA: An Economics Research Study Series – Volume 4: Reforming China*, edited by the Institute of World Economics and Politics, Chinese Academy of Social Sciences. Singapore: Marshall Cavendish Academic.
- Li, Shi and Bai Nansheng (eds.). 2005. *China Human Development Report - Development with Equity*. UNDP and China Development Research Foundation.

- Lin, Justin Y., Fang Cai, and Zhou Li. 2001. *State-owned enterprise reform in China*. Hong Kong: Chinese University Press.
- Liu, Pak-Wai, Xin Meng, and Junsen Zhang. 2000. Sectoral gender wage differentials and discrimination in the transitional Chinese economy. *Journal of Population Economics* 13(2):331-352.
- Liu, Pak-Wai, Junsen Zhang, and Shu-Chuen Chong. 2004. Occupational segregation and wage differentials between natives and immigrants: evidence from Hong Kong. *Journal of Development Economics* 73:395-413.
- Liu, Pak-Wai, Junsen Zhang, and Ching Yi Kung. 2004. What Has Happened to the Gender Wage Differential in Urban China During 1988-1999?, *Mimeo*. April.
- Lokshin Michael M., and Branko Jovanovic. 2003. Wage differentials and state private sector employment choice in Yugoslavia. *Economics of Transition* 11(3):463-491
- Maurer-Fazio, Margaret, and Ngan Dinh. 2004. Differential rewards to, and contributions of, education in urban China's segmented labor markets. *Pacific Economic Review* 9(3):173-189.
- Maurer-Fazio, Margaret, and James Hughes. 2002. The Effects of Market Liberalization on the Relative Earnings of Chinese Women. *Journal of Comparative Economics* 30(4):709-731.
- Meng, Xin. 1998. Male-female wage determination and gender wage discrimination in China's rural industrial sector. *Labour Economics* 5(1): 67-89.
- Meng, Xin. 2000. *Labour market reform in China*. Cambridge, UK: Cambridge University Press.
- Meng, Xin, and Paul Miller. 1995. Occupational Segregation and its Impact on Gender Wages Discrimination in China's Rural Industrial Sector. *Oxford Economic Papers* 47(1):136-155.
- Meng, Xin, and Junsen Zhang. 2001. The Two-Tier Labor Market in Urban China – Occupational Segregation and Wage Differentials between Urban Residents and Rural Migrants in Shanghai. *Journal of Comparative Economics* 29:485-504.
- Ministry of Labor and Social Security (MOLSS) and Literature Research Office of CCCPC (2002). *Selected Important Documents of Labor and Social Security in the New Period* Beijing: Publishing House of MOLSS.
- Mincer, Jacob. 1974. *Schooling, experience, and earnings*. New York: National Bureau of Economic Research.
- National Bureau of Statistics (NBS). 1999. *Comprehensive Statistical Data and Materials on 50 Years of New China*. Beijing: China Statistics Press.
- National Bureau of Statistics (NBS). 2002, 2003. *China Statistical Yearbook*. Beijing: China Statistics Press.

National Bureau of Statistics (NBS) and Ministry of Labor and Social Security (MLSS). 2003. *China Labor Statistical Yearbook*. Beijing: China Statistics Press

Ng, Ying Chu. 2005. Gender Earnings Differentials and Regional Economic Development in urban China, 1988-1997. *Mimeo*. Hong Kong Baptist University.

Oaxaca, Ronald L. 1973. Male-Female Wage Differentials in Urban Labor Markets. *International Economic Review* 14(3):693-709.

Qian, Jieyong. 1996. *Gender Wage Differentials in Urban China in the 1990s*. PhD. Dissertation. State University of New York at Binghamton.

Riskin, Carl, Renwei Zhao, and Shi Li. 2000. Chinese Household Income Project, 1995 [Computer file]. ICPSR version. Amherst, MA: University of Massachusetts, Political Economy Research Institute [producer], 2000. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor].

———. 2001. *China's Retreat from Equality – Income Distribution and Economic Transition*. London: M.E. Sharpe.

Rozelle, Scott, Xiaoyuan Dong, Linxiu Zhang, and Andrew Mason. 2002. Gender wage gaps in post-reform rural China. *Pacific Economic Review* 7(1): 157-179.

Zhao, Yaohui. 2001. Foreign direct investment and relative wages: The case of China. *China Economic Review* 12(1): 40-57.

———. 2002. Earnings differentials between State and Non-State Enterprises in Urban China. *Pacific Economic Review* 7(1):181-197.

Zhang, Junsen, Yaohui Zhao, Albert Park, and Xiaoqing Song. 2005. Economic returns to schooling in urban China, 1988 to 2001. *Journal of Comparative Economics* 33:730-752.

Table 1 – Main steps in China’s urban labor market reform

1978	Introduction of a retirement system in urban areas (60 years old for men / 50 years old for women with no less 10 years of working experience). ²⁴
1979	Reintroduction of bonuses and piece wages to improve labor productivity.
1982	Encouragement of development of self-employment and individual firms ²⁵ .
1983	Introduction of the labor contract system to cover new entrants into state and collective sectors. ²⁶ Introduction of a “job-holding without pay” scheme.
1984	More authority given to enterprises to determine wage and introduction of a floating wage system linked to enterprise performance and profitability. ²⁷
1986	New regulations promulgated, including <i>Temporary Regulations on Labor Contract System of State-owned Enterprises</i> , <i>Temporary Regulations on Dismissal of Lawbreaking Worker in State-owned Enterprises</i> , <i>Temporary Regulations on State-owned Enterprises Workers</i> , <i>Temporary Regulations on State-owned Enterprises Recruitment of Workers</i> , <i>Temporary Regulations on Laid-off Workers of State-owned Enterprises</i> . Law enabling enterprises to lay-off employees. Launching of an unemployment insurance scheme (July).
1987	New regulations on fixed-term contracts, calling for the extension of contracts to incumbent workers.
1990	Restrictions on migration of rural labor force to reduce employment pressure in urban areas. ²⁸
1991	Reform of the pension system. ²⁹
1992	<i>Labor Union Law</i> (April). More authority given to state-owned enterprises in the manufacturing sector in terms of recruitment and lay-off of workers as well as in setting wages and bonuses. ³⁰
1993	<i>Regulations on Reallocation of Surplus Staff and Workers of State-Owned Enterprises</i> , to define layoff (<i>xiagang</i>) conditions (firing procedures, amount of retired money, etc.). <i>Regulations on the Minimum Wage of State-Owned Enterprises</i> (November).
1994	Regulations on bankruptcy of state-owned enterprises and setting-up of re-employment centers. ³¹ Introduction of rules on interregional movement of rural labor force, including a number of cards such as the Employment Card and the Temporary Resident Card. ³² <i>Regulations on Wage Control of Joint-Stock Companies</i> (December).

²⁴ See State Council’s *Provisional Measures for Retirement and Quit of Workers*, issued on June 2, 1978.

²⁵ *Sixth Five-Year Plan of China Economic and Social Development*, ratified by the People’s Congress on December 10, 1982.

²⁶ See *Statement of the Ministry of Personnel and Labor on Active Implementation of Labor Contract*, issued on February 22, 1983.

²⁷ *The Central Committee of Chinese Communist Party’s Resolution on Economic Institutional Reform*, issued on October 20, 1984.

²⁸ See State Council’s *Notice on Effective Work for Urban Employment*, issued on April 27, 1990.

²⁹ See State Council’s *Resolution on Reform of Pension System for Enterprise Workers*, issued on June 26, 1991.

³⁰ See *Regulations on Transform of Operation Mechanism of State-owned Industrial Enterprises*, issued by the State Council on July 23, 1992.

³¹ See State Council’s *Notice on Some Issues Related to Trial Implementation of Bankruptcy for State-owned Enterprises in Selected Cities*, November 25, 1994.

³² See *Provisional Regulations on Employment of Rural Labor Force between Provinces*, issued by the Ministry of Labor, November 17, 1994.

1995	<p><i>Labor Law of the PRC</i> (effective on Jan. 1st), making labor contracts mandatory in all industrial enterprises, including TVEs.</p> <p>Working time legally set at no more than eight hours a day and no more than 44 hours a week on average in the state sector.³³</p> <p>Implementation of the re-employment project, providing preferential policy for firms employing unemployed workers and surplus laborers.³⁴</p>
1997	Acceleration in the implementation of the laid-off policy. ³⁵
1998	<p>Introduction of new re-employment policies such as encouraging development of private and individual enterprises, tax exemptions for firms employing laid-off workers.³⁶</p> <p>Regulations issued by the Ministry of Public Security to loosen the control on <i>hukou</i> registration.</p>
1999	<p><i>Regulations on Unemployment Insurance</i>, to help transform the laid-off subsidy system into an unemployment insurance system.</p> <p><i>Regulations on Security of Minimum Livelihood for Urban Residents</i>, to provide income program for poor urban households (September).</p>
2000	<p>More authority given to enterprises in wage setting and allowing managers to set higher wage for themselves.³⁷</p> <p><i>Provisional Regulations on Collective Negotiation in Wage Setting</i> (issued by MOLSS, November).</p>
2001	Pilot implementation of the New Social Security Scheme in some cities. ³⁸
2003	Drop of some restrictions to rural-urban migration, including abolishment of various cards and fees charged on migrant workers. ³⁹

Sources: Cai (2005), Fleisher and Yang (2003), Meng (2000), MOLSS and Literature Research Office of CCCPC (2002), Zhang *et al.* (2005).

³³ See State Council's *Regulations on Work Time of Workers*, issued on March 25, 1995.

³⁴ See *Report of the Ministry of Labor on Implementation of the Re-employment Project*, Submitted to the State Council on March 27, 1995.

³⁵ See State Council's *Complementary Notice on Some Issues Related to Trial Implementation of Merge and Bankruptcy for State-owned Enterprises and Re-employment of Workers in Selected Cities*, March 2, 1997.

³⁶ See CCCPC and State Council's *Notice on Security of Basic Livelihood of Laid-off Workers from State-owned Enterprises and Emphasis on Re-employment*, June 9, 1998.

³⁷ See *Guidelines for Further Deepening Distribution System in Enterprises*, issued by the MOLSS, November 6, 2000.

³⁸ See State Council's *Complementary Notice on Pilot Plan for Perfecting Social Security System in Urban Areas*, December 25, 2000.

³⁹ See *Notice on Better Services and Management of Employment for Rural-Urban Migrant Workers*, issued by the State Council, January 5, 2003.

Table 2 – Distribution of sampled households for urban surveys (1995 and 2002)

Province	1995		2002	
	Number of cities	Number of sampled households	Number of cities	Number of sampled households
Beijing	1	500	1	500
Shanxi	7	650	7	650
Liaoning	5	700	5	700
Jiangsu	9	800	9	750
Anhui	6	500	6	500
Henan	8	600	8	700
Hubei	7	742	7	700
Guangdong	8	546	8	550
Chongqing	-	-	2	300
Sichuan	7	848	6	600
Yunnan	9	648	8	650
Gansu	3	400	3	400
Total	69	6,934	69	7,000

Source: 1995 and 2002 CHIP survey data.

Table 3 – Correlation between the three segments

3.1. Ownership / Sector

1995

Ownership	Sector				Total
	Compet.	Oligop.	Pub. serv.	Gov.	
SOEs	88.45	4.49	4.93	2.14	100
	69.85	38.04	16.62	9.19	52.26
UCEs	91.51	6.05	2.44	0	100
	21.11	14.99	2.41	0	15.26
PIEs	84.15	12.57	3.28	0	100
	2.07	3.31	0.34	0	1.62
FIEs	94.7	4.55	0.76	0	100
	1.68	0.86	0.06	0	1.17
GAIs	11.82	8.88	42.06	37.24	100
	5.3	42.8	80.57	90.81	29.68
Total	66.17	6.16	15.49	12.17	100
	100	100	100	100	100

2002

Ownership	Sector				Total
	Compet.	Oligop.	Pub. serv.	Gov.	
SOEs	82.41	10.2	5.68	1.71	100
	49.39	58.01	9.2	3.75	34.28
UCEs	90	4.51	5.49	0	100
	10.92	5.19	1.8	0	6.94
PIEs	91.03	4.78	4.19	0	100
	33.1	16.48	4.12	0	20.79
FIEs	84.49	7.49	8.02	0	100
	3.76	3.16	0.96	0	2.54
GAIs	4.57	2.92	50.12	42.4	100
	2.83	17.16	83.92	96.25	35.44
Total	57.2	6.03	21.16	15.61	100
	100	100	100	100	100

3.2. Ownership / Region

1995

Ownership	Region					Total
	Coast	Centre	West	Munic.	North-e	
SOEs	17.07	35.68	27.21	7.8	12.24	100
	46.68	55.15	53.39	58.31	60.41	53.8
UCEs	28.83	31.91	24.05	3.47	11.73	100
	20.89	13.07	12.5	6.88	15.34	14.26
PIEs	50	22.62	19.05	3.57	4.76	100
	1.99	0.51	0.55	0.39	0.34	0.78
FIEs	55.07	10.87	13.77	12.32	7.97	100
	3.61	0.4	0.65	2.21	0.94	1.29
GAIs	17.67	35.97	30.22	7.76	8.38	100
	26.83	30.86	32.91	32.21	22.96	29.87
Total	19.67	34.81	27.42	7.19	10.9	100
	100	100	100	100	100	100

2002

Ownership	Region					Total
	Coast	Centre	West	Munic.	North-e	
SOEs	17.32	36.61	25.22	8.93	11.93	100
	33.49	39	34.76	40.95	40.48	37.12
UCEs	25.96	26.55	24.48	4.57	18.44	100
	10.09	5.69	6.79	4.22	12.59	7.47
PIEs	23.83	30.96	26.94	5.38	12.9	100
	24.14	17.29	19.47	12.93	22.96	19.46
FIEs	30.33	22.27	12.32	25.59	9.48	100
	3.67	1.49	1.06	7.35	2.01	2.32
GAIs	16.34	37.85	30.35	8.32	7.14	100
	28.61	36.54	37.91	34.56	21.95	33.63
Total	19.2	34.84	26.92	8.09	10.93	100
	100	100	100	100	100	100

3.3. Sector / Region

1995

Sector	Region					Total
	Coast	Centre	West	Munic.	North-e	
Competitive	20.81	35.47	27.01	5.74	10.98	100
	69.52	65.08	65.45	59.13	72.89	66.46
Oligop.	25.1	33.47	23.85	7.67	9.9	100
	7.89	5.78	5.44	7.44	6.19	6.26
Public serv.	17.65	36.09	28.84	8.79	8.62	100
	13.55	15.22	16.07	20.84	13.16	15.28
Government	14.97	42.01	29.8	6.76	6.47	100
	9.04	13.92	13.04	12.58	7.76	12.01
Total	19.89	36.23	27.42	6.45	10.01	100
	100	100	100	100	100	100

2002

Sector	Region					Total
	Coast	Centre	West	Munic.	North-e	
Competitive	21.54	34.92	27.6	5.94	10	100
	65.34	54.41	56.75	46.91	62.63	57.34
Oligop.	15.96	46.12	19.07	8.2	10.64	100
	5.03	7.47	4.07	6.73	6.93	5.96
Public serv.	15.79	40.88	27.23	8.49	7.61	100
	17.54	23.33	20.51	24.55	17.46	21
Government	14.55	34.65	33.14	10.09	7.57	100
	12.09	14.79	18.66	21.82	12.99	15.7
Total	18.9	36.8	27.88	7.26	9.15	100
	100	100	100	100	100	100

Source: Authors' calculations using the 1995 and 2002 CHIP survey data.

Table 4 – Descriptive Statistics on individual characteristics by segment, 1995 and 2002

4.1. Ownership

1995	All	SOEs	UCEs	PIEs	FIEs	GAIs
# obs.	10,730	5,775	1,534	84	138	3,199
%	100	53.82	14.30	0.78	1.29	29.81
Male (%)	53.34	55.83	40.81	52.38	54.35	54.83
Age	38.39	38.42	38.02	32.07	30.96	39.00
Years of education	10.79	10.47	9.25	9.29	11.07	12.15
Communist (%)	25.12	21.51	11.54	4.76	10.14	39.32
Coast (%)	26.91	24.92	32.40	53.57	67.39	25.41
Long term tenure (%)	96.32	98.32	92.12	7.50	59.26	98.57

2002	All	SOEs	UCEs	PIEs	FIEs	GAIs
# obs.	9,081	3,371	678	1,767	211	3,054
%	100	37.12	7.47	19.46	2.32	33.63
Male (%)	56.69	60.99	43.51	55.80	59.24	55.21
Age	40.41	41.17	41.36	38.58	35.15	40.78
Years of education	11.52	11.18	10.06	10.48	12.30	12.75
Communist (%)	29.88	28.36	19.32	14.20	14.22	44.04
Coast (%)	27.30	26.25	30.53	29.20	55.92	24.66
Long term tenure (%)	77.11	88.42	72.57	38.17	56.40	89.64

Source: Authors' calculations using the 1995 and 2002 CHIP survey data.

Notes:

1. The sample includes individuals aged 16 to 60, who declared working at least a part of the year and earning (positive) wages. Owners of private or individual enterprises are not considered.
2. Education and Experience are the number of years of education and work experience declared by the respondent.
3. "Coast" dummy includes Beijing, Guangdong, and Jiangsu.
4. Long-term tenure includes both permanent workers and long-term contract workers, as opposed to temporary or short-term contract workers.
5. Ownership categories are: state-owned enterprises (SOEs), urban collective enterprises (UCEs), private or individual enterprises, (PIEs), foreign-invested enterprises (FIEs), and government agencies or institutions (GAIs).
6. Tables for different dimensions (ownership, sector and regions) may show slightly different average total values and due to attrition on categorical variables.

4.2. Sectors

1995	All	Competitive	Oligopolistic	Public services	Government
# obs	9,665	6,343	607	1,466	1,249
%	100	65.63	6.28	15.17	12.92
Male (%)	52.42	52.40	48.60	46.04	61.81
Age	38.33	38.00	36.08	40.21	38.89
Years of education	10.78	10.16	10.68	12.32	12.18
Communist (%)	24.80	18.97	22.73	28.17	51.48
SOE (%)	81.95	75.07	81.38	97.41	98.96
Coast (%)	26.93	27.29	33.77	26.74	22.02
Long term tenure (%)	96.24	95.60	92.32	98.89	98.30

2002	All	Competitive	Oligopolistic	Public services	Government
# obs	8,195	4,752	706	1,560	1,177
%	100	57.99	8.62	19.04	14.36
Male (%)	54.31	52.61	58.50	50.32	63.98
Age	40.44	40.37	39.19	40.65	41.20
Years of education	11.57	10.69	11.87	13.07	12.96
Communist (%)	30.24	21.74	29.04	34.17	60.07
SOE (%)	74.92	61.99	86.54	93.27	95.84
Coast (%)	27.41	28.83	28.33	24.55	24.89
Long term tenure (%)	74.44	64.80	81.59	89.87	88.73

Source: Authors' calculations using the 1995 and 2002 CHIP survey data.

Notes:

1. See Table 4.1.
2. See text for a full definition of sectors.
3. The lower number of observation is due to the omission of unclear sectors. See text for details.

4.3. Regions

1995	All	Coast	Center	West	Municipality	North-East
# obs	10,898	2,170	3,778	2,991	779	1,180
%	100	19.91	34.67	27.45	7.15	10.83
Male (%)	53.18	53.13	53.81	51.92	54.30	53.73
Age	38.37	38.45	37.52	38.71	40.24	38.87
Years of education	10.78	10.48	10.76	10.71	11.86	10.87
Communist (%)	25.00	23.64	24.80	26.38	31.19	20.51
SOE (%)	82.35	71.57	85.07	84.75	89.73	82.46
Long term tenure (%)	96.14	92.86	97.21	96.72	95.45	97.69

2002	All	Coast	Center	West	Municipality	North-East
# obs	9,537	1,812	3,300	2,576	799	1,050
%	100	19.00	34.60	27.01	8.38	11.01
Male (%)	56.09	54.86	57.06	55.16	54.07	58.95
Age	40.38	40.57	39.58	40.54	42.46	40.58
Years of education	11.50	11.33	11.61	11.26	12.26	11.44
Communist (%)	29.62	28.81	30.18	30.55	29.29	27.24
SOE (%)	75.23	70.09	79.33	77.76	77.60	63.24
Long term tenure (%)	74.87	69.87	80.92	76.99	68.46	64.29

Source: Authors' calculations using the 1995 and 2002 CHIP survey data.

Notes:

4. See Table 4.1.
5. See text for a full definition of regions.

Table 5 – Descriptive Statistics on individual earnings by segment, 1995 and 2002

5.1. Ownership

1995	All	SOEs	UCEs	PIEs	FIEs	GAIs
Total annual earnings	6,155	6,178	4,878	5,199	8,148	6,667
<i>c.v.</i>	0.51	0.51	0.57	0.81	0.74	0.45
<i>Gap to average earnings</i>		1.00	0.79	0.84	1.32	1.08
Basic wage	3,821	3,833	3,240	4,614	6,531	3,942
<i>c.v.</i>	0.56	0.53	0.59	0.89	0.92	0.49
Bonus	983	1,067	703	257	847	991
<i>c.v.</i>	1.64	1.58	2.14	5.19	1.86	1.55
Subsidies	1,115	1,032	627	76	460	1,556
<i>c.v.</i>	1.07	0.98	1.16	3.50	1.91	0.97
Income in kind	99	99	69	105	86	113
<i>c.v.</i>	2.72	2.62	3.76	4.56	2.53	2.49
Hourly wage	2.89	2.88	2.36	1.96	3.45	3.15
<i>c.v.</i>	0.65	0.66	0.82	0.86	0.73	0.54
Hours worked per week	43.7	44.0	43.5	56.6	47.2	42.8
<i>c.v.</i>	0.17	0.16	0.23	0.27	0.19	0.15

2002	All	SOEs	UCEs	PIEs	FIEs	GAIs
Total annual earnings	11,071	10,840	7,630	8,286	13,305	13,547
<i>c.v.</i>	0.66	0.62	0.61	0.92	0.66	0.53
<i>Gap to average earnings</i>		0.98	0.69	0.75	1.20	1.22
Basic wage	9,128	8,985	6,709	7,141	11,081	10,838
<i>c.v.</i>	0.63	0.58	0.59	0.89	0.61	0.53
Bonus	1,049	1,149	549	595	1,372	1,290
<i>c.v.</i>	2.41	2.23	3.75	3.40	2.12	2.15
Subsidies	673	526	255	166	524	1,231
<i>c.v.</i>	2.94	2.93	3.40	4.36	4.01	2.26
Income in kind	130	119	94	139	333	131
<i>c.v.</i>	7.68	6.81	3.11	11.19	9.02	3.43
Hourly wage	5.38	5.31	3.64	3.66	6.16	6.79
<i>c.v.</i>	0.88	0.84	0.66	1.08	0.71	0.79
Hours worked per week	43.7	42.3	43.5	50.1	44.6	41.4
<i>c.v.</i>	0.23	0.19	0.23	0.29	0.22	0.19

Source: Authors' calculations using the 1995 and 2002 CHIP survey data.

Notes:

1. The sample includes individuals aged 16 to 60, who declared working at least a part of the year and earning (positive) wages. Owners of private or individual enterprises are not considered.
2. The earnings variable is defined as the sum of the basic wage, bonuses, allowances and subsidies, other wages, and income in kind.
3. Earnings are deflated using the urban provincial-level spatial price deflators calculated by Brandt and Holz (2005). Base = nationwide prices in 2002.
4. The gap to average earnings is calculated as average total earnings for enterprise category *i* divided by average total earnings for all categories of enterprises (reported in column 1).
5. Ownership categories are: state-owned enterprises (SOEs), urban collective enterprises (UCEs), private or individual enterprises, (PIEs), foreign-invested enterprises (FIEs), and government agencies or institutions (GAIs).

5.2. Economic sectors

1995	All	Competitive	Oligopolistic	Public services	Government
Total annual earnings	6,089	5,824	6,428	6,815	6,419
<i>c.v.</i>	0.51	0.52	0.59	0.41	0.47
<i>Gap to average earnings</i>		0.96	1.06	1.12	1.05
Basic wage	3,792	3,740	3,624	4,038	3,848
<i>c.v.</i>	0.55	0.57	0.58	0.48	0.49
Bonus	961	929	1,354	1,005	886
<i>c.v.</i>	1.66	1.68	1.81	1.33	1.69
Subsidies	1,098	889	1,243	1,597	1,503
<i>c.v.</i>	1.07	1.03	1.20	0.88	1.02
Income in kind	99	91	113	105	123
<i>c.v.</i>	2.76	2.93	2.37	2.81	2.23
Hourly wage	2.85	2.73	2.97	3.23	3.00
<i>c.v.</i>	0.63	0.67	0.69	0.52	0.52
Hours worked per week	43.7	43.9	44.3	42.9	43.1
<i>c.v.</i>	0.17	0.18	0.18	0.15	0.15

2002	All	Competitive	Oligopolistic	Public services	Government
Total annual earnings	10,910	8,860	13,086	14,410	13,245
<i>c.v.</i>	0.67	0.71	0.66	0.56	0.49
<i>Gap to average earnings</i>		0.81	1.20	1.32	1.21
Basic wage	8,959	7,544	10,534	11,069	10,930
<i>c.v.</i>	0.64	0.69	0.61	0.53	0.52
Bonus	1,036	777	1,514	1,601	1,042
<i>c.v.</i>	2.46	2.84	2.20	1.98	2.08
Subsidies	672	327	730	1,207	1,320
<i>c.v.</i>	2.96	3.65	2.94	2.18	2.21
Income in kind	132	101	309	120	165
<i>c.v.</i>	7.90	7.22	9.12	3.74	3.54
Hourly wage	5.30	4.13	6.41	7.33	6.64
<i>c.v.</i>	0.87	0.81	0.69	0.93	0.63
Hours worked per week	43.8	45.5	41.6	41.7	41.1
<i>c.v.</i>	0.24	0.26	0.18	0.20	0.18

Source: Authors' calculations using the 1995 and 2002 CHIP survey data.

Notes:

1. See table 5.1.
2. See text for definitions of economic sectors.

5.3. Regions

1995	All	Coast	Center	West	Municipality	North-East
Total annual earnings	6,151	7,558	5,409	5,851	7,495	5,812
<i>c.v.</i>	0.51	0.55	0.47	0.44	0.48	0.49
<i>Gap to average earnings</i>		1.23	0.88	0.95	1.22	0.94
Basic wage	3,824	4,072	3,656	3,693	4,366	3,874
<i>c.v.</i>	0.56	0.63	0.50	0.51	0.70	0.52
Bonus	981	1,831	645	773	1,558	639
<i>c.v.</i>	1.64	1.53	1.27	1.31	1.02	1.59
Subsidies	1,111	1,357	845	1,217	1,365	1,070
<i>c.v.</i>	1.07	1.26	1.04	0.88	0.87	0.93
Income in kind	99	108	115	78	106	78
<i>c.v.</i>	2.72	2.85	2.32	2.76	2.75	3.84
Hourly wage	2.89	3.54	2.56	2.74	3.43	2.71
<i>c.v.</i>	0.65	0.66	0.67	0.62	0.52	0.54
Hours worked per week	43.7	44.0	43.5	43.8	43.7	43.4
<i>c.v.</i>	0.17	0.19	0.18	0.16	0.16	0.16

2002	All	Coast	Center	West	Municipality	North-East
Total annual earnings	10,919	13,376	9,782	10,435	12,691	10,090
<i>c.v.</i>	0.66	0.75	0.61	0.57	0.62	0.62
<i>Gap to average earnings</i>		1.23	0.90	0.96	1.16	0.92
Basic wage	9,022	10,251	8,423	8,664	10,233	8,736
<i>c.v.</i>	0.64	0.72	0.58	0.59	0.71	0.58
Bonus	1,011	1,780	677	878	1,396	769
<i>c.v.</i>	2.45	2.14	2.33	2.28	2.24	2.64
Subsidies	656	1,071	361	748	902	454
<i>c.v.</i>	2.98	2.77	3.10	2.32	3.02	3.01
Income in kind	129	222	129	71	150	97
<i>c.v.</i>	7.66	9.40	3.32	3.60	5.23	3.87
Hourly wage	5.30	6.54	4.71	5.11	6.29	4.76
<i>c.v.</i>	0.89	0.98	0.83	0.86	0.79	0.65
Hours worked per week	43.8	43.7	44.3	44.1	41.3	43.8
<i>c.v.</i>	0.24	0.24	0.25	0.25	0.20	0.22

Source: Authors' calculations using the 1995 and 2002 CHIP survey data.

Notes:

1. See table 5.1.
2. See text for definitions of regional variables.

Table 6 – Decomposition of observed earnings gaps by segment, 1995 and 2002

6.1. Ownership

1995			Observed differences				Endowment effect				Segmentation effect				Hours worked effect			
			5%		95%		5%		95%		5%		95%		5%		95%	
SOE	UCE	<i>(yuan)</i>	-1,299	***	-1,454	-1,147	-352	***	-498	-215	-811	***	-968	-641	-136	***	-241	-56
		<i>(%)</i>	-27		-	-	-7		-10	-4	-17		-20	-13	-3		-5	-1
SOE	PIE	<i>(yuan)</i>	-979	***	-1,623	-189	-578	ns	-3,950	1,391	-1,228	ns	-3,692	3,587	827	*	-502	1,968
		<i>(%)</i>	-19		-	-	-11		-79	28	-24		-74	69	16		-10	39
SOE	FIE	<i>(yuan)</i>	1,970	***	1,250	2,797	303	ns	-500	1,500	1,394	***	251	2,496	273	*	-184	606
		<i>(%)</i>	32		-	-	5		-8	24	23		4	41	4		-3	10
SOE	GAI	<i>(yuan)</i>	490	***	388	593	133	***	41	220	532	***	379	656	-175	***	-234	-120
		<i>(%)</i>	8		-	-	2		1	4	9		6	11	-3		-4	-2
UCE	PIE	<i>(yuan)</i>	321	ns	-309	1,005	-485	ns	-5,256	1,492	-279	ns	-2,713	4,440	1,084	***	146	1,952
		<i>(%)</i>	7		-	-	-10		-108	31	-6		-57	95	22		3	41
UCE	FIE	<i>(yuan)</i>	3,270	***	2,572	4,070	823	***	236	1,828	1,958	***	1,016	2,969	490	***	112	845
		<i>(%)</i>	67		-	-	17		5	38	40		21	61	10		2	18
UCE	GAI	<i>(yuan)</i>	1,789	***	1,648	1,909	445	***	202	676	1,336	***	1,069	1,595	9	ns	-117	179
		<i>(%)</i>	37		-	-	9		4	14	27		22	33	0		-2	4
PIE	FIE	<i>(yuan)</i>	2,949	***	2,020	3,933	1,712	ns	-2,301	5,953	1,833	ns	-4,521	5,771	-596	*	-2,390	1,224
		<i>(%)</i>	57		-	-	33		-40	123	35		-89	118	-12		-47	23
PIE	GAI	<i>(yuan)</i>	1,468	***	678	2,139	-640	*	-2,887	3,420	3,028	**	-1,649	5,447	-919	*	-2,475	634
		<i>(%)</i>	28		-	-	-12		-56	68	58		-40	109	-18		-47	12
FIE	GAI	<i>(yuan)</i>	-1,481	***	-2,325	-749	-155	ns	-1,365	1,120	-943	***	-2,377	-5	-383	ns	-904	394
		<i>(%)</i>	-22		-	-	-2		-21	17	-14		-36	0	-6		-14	6

Source: Authors' calculations using the 1995 and 2002 CHIP survey data.

Notes:

1. Percentages are calculated as a percentage of the lowest wage.
2. Decompositions based on regressions results presented in Appendices A and B.
3. Confidence intervals and significance test are derived from a 300 replications bootstrap procedure: * indicates that the estimated effect is statistically significant at 20%, ** at 10% and *** at 5%.
4. Ownership categories are: state-owned enterprises (SOEs), urban collective enterprises (UCEs), private or individual enterprises, (PIEs), foreign-invested enterprises (FIEs), and government agencies or institutions (GAIs).
5. Earnings are deflated using the urban provincial-level spatial price deflators calculated by Brandt and Holz (2005). Base = nationwide prices in 2002.

2002			Observed differences				Endowment effect				Segmentation effect				Hours worked effect			
			5%		95%		5%		95%		5%		95%		5%		95%	
SOE	UCE	<i>(yuan)</i>	-3,210	***	-3,521	-2,788	-913	***	-1,240	-598	-2,552	***	-2,957	-2,119	256	***	93	451
		<i>(%)</i>	-42		-	-	-12		-16	-8	-33		-40	-27	3		1	6
SOE	PIE	<i>(yuan)</i>	-2,554	***	-2,932	-2,243	128	ns	-980	1,416	-4,163	***	-5,861	-2,678	1,481	***	921	2,318
		<i>(%)</i>	-31		-	-	2		-12	17	-50		-72	-32	18		11	28
SOE	FIE	<i>(yuan)</i>	2,465	***	1,589	3,512	165	ns	-802	1,222	1,746	***	610	2,770	554	***	97	938
		<i>(%)</i>	23		-	-	2		-7	11	16		6	25	5		1	9
SOE	GAI	<i>(yuan)</i>	2,707	***	2,450	2,998	411	***	113	727	2,476	***	2,131	2,853	-180	***	-364	-43
		<i>(%)</i>	25		-	-	4		1	7	23		19	26	-2		-3	0
UCE	PIE	<i>(yuan)</i>	656	***	279	1,019	1,182	***	544	1,849	-1,552	***	-2,563	-619	1,026	***	758	1,394
		<i>(%)</i>	9		-	-	16		7	24	-20		-33	-8	13		10	18
UCE	FIE	<i>(yuan)</i>	5,675	***	4,843	6,953	1,526	***	272	3,110	3,857	***	2,346	5,460	292	*	-242	948
		<i>(%)</i>	74		-	-	20		4	41	51		31	74	4		-3	12
UCE	GAI	<i>(yuan)</i>	5,917	***	5,567	6,256	1,398	***	638	2,140	4,952	***	4,256	5,821	-433	***	-826	-141
		<i>(%)</i>	78		-	-	18		8	28	65		55	77	-6		-11	-2
PIE	FIE	<i>(yuan)</i>	5,019	***	4,111	6,100	515	ns	-1,574	2,342	5,403	***	3,974	6,728	-899	***	-1,811	-338
		<i>(%)</i>	61		-	-	6		-19	28	65		47	81	-11		-22	-4
PIE	GAI	<i>(yuan)</i>	5,261	***	4,925	5,683	543	ns	-1,396	2,083	6,434	***	5,452	7,490	-1,716	***	-3,068	-915
		<i>(%)</i>	64		-	-	7		-17	26	78		65	90	-21		-37	-11
FIE	GAI	<i>(yuan)</i>	242	ns	-957	1,092	248	ns	-1,047	1,439	712	ns	-631	2,189	-717	***	-1,321	-146
		<i>(%)</i>	2		-	-	2		-8	11	5		-5	17	-5		-10	-1

6.2. Sectors

1995			Observed differences				Endowment effect				Segmentation effect				Hours worked effect			
			5%		95%		5%		95%		5%		95%		5%		95%	
Comp	Olig	(yuan)	604	***	373	880	71	ns	-137	288	503	***	195	771	30	ns	-83	147
		(%)	10		-	-	1		-2	5	9		3	13	1		-1	3
Comp	Publ. Serv.	(yuan)	992	***	859	1,107	358	***	152	605	722	***	443	935	-88	***	-170	-6
		(%)	17		-	-	6		3	10	12		8	16	-2		-3	0
Comp	Govt	(yuan)	595	***	459	695	281	***	61	432	438	***	268	681	-124	***	-198	-58
		(%)	10		-	-	5		1	7	8		5	12	-2		-3	-1
Olig	Publ. Serv.	(yuan)	387	***	103	662	545	***	217	1,005	-8	ns	-519	399	-150	**	-285	5
		(%)	6		-	-	9		3	16	0		-8	6	-2		-4	0
Olig	Govt	(yuan)	-9	ns	-287	258	470	**	-53	1,041	-348	ns	-1,080	243	-131	**	-276	31
		(%)	0		-	-	7		-1	16	-5		-17	4	-2		-4	1
Publ. Serv.	Govt	(yuan)	-396	***	-556	-247	-40	ns	-189	120	-361	***	-546	-191	4	ns	-89	101
		(%)	-6		-	-	-1		-3	2	-6		-9	-3	0		-1	2

2002			Observed differences				Endowment effect				Segmentation effect				Hours worked effect			
			5%		95%		5%		95%		5%		95%		5%		95%	
Comp	Olig	(yuan)	4,227	***	3,796	4,771	-125	ns	-916	444	5,241	***	4,699	5,829	-890	***	-1,408	-506
		(%)	48		-	-	-1		-10	5	59		53	66	-10		-16	-6
Comp	Publ. Serv.	(yuan)	5,550	***	5,138	5,868	615	***	195	1,058	5,628	***	5,343	5,829	-693	***	-1,111	-371
		(%)	63		-	-	7		2	12	64		60	66	-8		-13	-4
Comp	Govt	(yuan)	4,385	***	4,017	4,735	884	***	120	1,467	4,411	***	3,883	5,002	-910	***	-1,436	-509
		(%)	50		-	-	10		1	17	50		44	57	-10		-16	-6
Olig	Publ. Serv.	(yuan)	1,323	***	725	1,839	592	**	-70	1,166	645	**	-70	1,389	86	ns	-178	351
		(%)	10		-	-	5		-1	9	5		-1	11	1		-1	3
Olig	Govt	(yuan)	159	ns	-313	668	1,155	***	456	1,926	-891	***	-1,775	-19	-105	ns	-347	155
		(%)	1		-	-	9		3	15	-7		-14	0	-1		-3	1
Publ. Serv.	Govt	(yuan)	-1,165	***	-1,608	-750	766	***	139	1,428	-1,684	***	-2,108	-1,172	-246	***	-483	-7
		(%)	-9		-	-	6		1	11	-13		-16	-9	-2		-4	0

Source: Authors' calculations using the 1995 and 2002 CHIP survey data.

Notes: See Table 6.1. and text for a full definition of sectors.

6.3. Regions

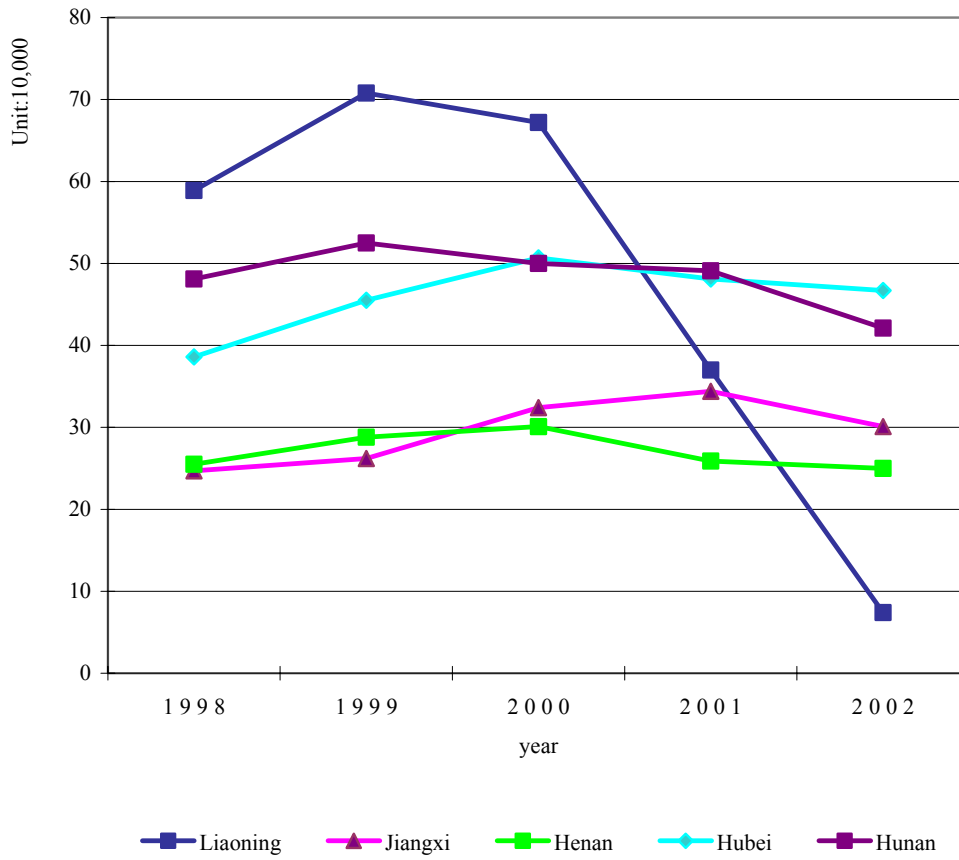
<u>1995</u>			Observed differences				Endowment effect				Segmentation effect				Hours worked effect			
			5%		95%		5%		95%		5%		95%		5%		95%	
Coast	Centre	(yuan)	-2,149	***	-2,293	-1,984	-215	***	-312	-117	-1,908	***	-2,047	-1,764	-27	ns	-81	27
		(%)	-40		-	-	-4		-6	-2	-35		-38	-32	-1		-2	1
Coast	West	(yuan)	-1,707	***	-1,861	-1,547	-104	**	-239	21	-1,664	***	-1,853	-1,472	61	**	-6	122
		(%)	-29		-	-	-2		-4	0	-28		-32	-25	1		0	2
Coast	Municip	(yuan)	-63	ns	-287	176	640	***	71	1,290	-844	***	-1,492	-175	141	ns	-95	379
		(%)	-1		-	-	9		1	17	-11		-20	-2	2		-1	5
Coast	N-E.	(yuan)	-1,746	***	-1,975	-1,545	519	***	134	870	-2,337	***	-2,838	-1,936	72	*	-19	195
		(%)	-30		-	-	9		2	15	-40		-50	-33	1		0	3
Centre	West	(yuan)	442	***	355	529	131	***	52	225	251	***	156	347	60	***	13	104
		(%)	8		-	-	2		1	4	5		3	6	1		0	2
Centre	Municip	(yuan)	2,086	***	1,857	2,263	790	***	383	1,182	1,199	***	756	1,668	97	*	-29	233
		(%)	39		-	-	15		7	22	22		14	31	2		-1	4
Centre	N-E.	(yuan)	403	***	238	563	723	***	317	1,121	-382	*	-832	93	62	*	-36	174
		(%)	7		-	-	13		6	21	-7		-15	2	1		-1	3
West	Municip	(yuan)	1,644	***	1,429	1,840	791	***	373	1,204	814	***	347	1,316	39	ns	-63	158
		(%)	28		-	-	14		6	21	14		6	22	1		-1	3
West	N-E.	(yuan)	-39	ns	-185	124	633	***	360	923	-663	***	-986	-343	-9	ns	-105	95
		(%)	-1		-	-	11		6	16	-11		-17	-6	0		-2	2
Municip	N-E.	(yuan)	-1,683	***	-1,914	-1,419	-585	***	-1,018	-156	-994	***	-1,495	-509	-105	*	-262	36
		(%)	-29		-	-	-10		-17	-3	-17		-26	-9	-2		-4	1

2002			Observed differences				Endowment effect				Segmentation effect				Hours worked effect			
			5%		95%		5%		95%		5%		95%		5%		95%	
Coast	Centre	(yuan)	-3,594	***	-3,903	-3,153	142	ns	-255	509	-3,967	***	-4,156	-3,654	231	***	85	424
		(%)	-37		-	-	2		-3	5	-41		-43	-38	2		1	4
Coast	West	(yuan)	-2,941	***	-3,453	-2,554	-202	ns	-591	231	-2,879	***	-3,413	-2,337	141	**	-2	288
		(%)	-28		-	-	-2		-6	2	-28		-33	-22	1		0	3
Coast	Municip	(yuan)	-685	***	-1,248	-177	1,808	**	-61	4,305	-2,312	***	-4,987	-799	-181	ns	-631	193
		(%)	-5		-	-	14		-1	34	-18		-39	-6	-1		-5	2
Coast	N-E.	(yuan)	-3,285	***	-3,720	-2,879	731	**	-144	1,681	-4,178	***	-4,559	-3,722	162	*	-124	433
		(%)	-33		-	-	7		-1	17	-41		-46	-37	2		-1	4
Centre	West	(yuan)	653	***	361	1,006	-313	***	-517	-91	1,050	***	659	1,475	-84	*	-199	36
		(%)	7		-	-	-3		-5	-1	11		7	15	-1		-2	0
Centre	Municip	(yuan)	2,909	***	2,341	3,418	723	ns	-791	2,178	2,670	***	1,341	4,077	-484	***	-832	-87
		(%)	30		-	-	7		-8	22	27		14	41	-5		-9	-1
Centre	N-E.	(yuan)	309	**	-46	670	173	ns	-243	634	222	ns	-354	832	-86	ns	-287	98
		(%)	3		-	-	2		-3	7	2		-4	9	-1		-3	1
West	Municip	(yuan)	2,256	***	1,760	2,735	1,362	*	-247	2,894	1,191	*	-528	2,958	-298	***	-600	-23
		(%)	22		-	-	13		-2	28	11		-5	28	-3		-6	0
West	N-E.	(yuan)	-344	***	-822	0	597	***	211	1,028	-995	***	-1,584	-371	54	ns	-183	261
		(%)	-3		-	-	6		2	10	-10		-16	-4	1		-2	3
Municip	N-E.	(yuan)	-2,600	***	-3,227	-2,060	-997	***	-1,782	-180	-2,056	***	-3,100	-1,134	452	***	184	721
		(%)	-26		-	-	-10		-18	-2	-20		-31	-11	5		2	7

Source: Authors' calculations using the 1995 and 2002 CHIP survey data.

Notes: See Table 6.1. and text for a full definition of regions.

Figure 1 - Number of laid-off workers in SOEs at the end of year: comparison of Liaoning with central provinces



Source: National Bureau of Statistics (NBS) and Ministry of Labor and Social Security (MLSS) 2003.

Appendix A1 - Hourly wage functions by ownership, Year: 1995

	SOEs		UCEs		PIEs		FIEs		GAIs	
	<i>Women</i>	<i>Men</i>	<i>Women</i>	<i>Men</i>	<i>Women</i>	<i>Men</i>	<i>Women</i>	<i>Men</i>	<i>Women</i>	<i>Men</i>
Education	0.015	0.025	0.002	0.018	-0.245	-0.069	0.052	0.074	0.021	0.013
	<i>3.11</i>	<i>5.56</i>	<i>0.17</i>	<i>1.46</i>	<i>-2.02</i>	<i>-0.57</i>	<i>1.2</i>	<i>1.53</i>	<i>3.54</i>	<i>3.2</i>
Work Exp.	0.069	0.045	0.074	0.062	0.178	0.111	0.028	0.026	0.052	0.044
	<i>10.05</i>	<i>11.07</i>	<i>5.78</i>	<i>6.05</i>	<i>2.23</i>	<i>1.49</i>	<i>1.04</i>	<i>1.1</i>	<i>8.11</i>	<i>9.02</i>
(Work Exp.)²	-0.00128	-0.00065	-0.00172	-0.00123	-0.00491	-0.00332	0.00001	-0.00027	-0.00086	-0.00061
	<i>-7.06</i>	<i>-6.67</i>	<i>-4.39</i>	<i>-5.01</i>	<i>-1.51</i>	<i>-1.23</i>	<i>0.01</i>	<i>-0.4</i>	<i>-5.46</i>	<i>-6.05</i>
Central Province	-0.055	-0.023	0.024	-0.025	0.523	-0.173	0.593	0.338	-0.127	-0.066
	<i>-2.17</i>	<i>-1</i>	<i>0.53</i>	<i>-0.41</i>	<i>0.76</i>	<i>-0.31</i>	<i>1.97</i>	<i>1.32</i>	<i>-4.56</i>	<i>-3.21</i>
Coastal Province	0.153	0.216	0.312	0.275	2.351	0.409	0.758	0.527	0.205	0.226
	<i>4.92</i>	<i>8.64</i>	<i>6.41</i>	<i>4.93</i>	<i>4.16</i>	<i>0.77</i>	<i>2.72</i>	<i>2.2</i>	<i>6.07</i>	<i>7.73</i>
Big city	0.130	0.135	0.156	0.116	1.716	0.841	0.364	-0.086	0.010	0.057
	<i>6.08</i>	<i>6.95</i>	<i>4.06</i>	<i>2.34</i>	<i>3.14</i>	<i>3.11</i>	<i>2.27</i>	<i>-0.56</i>	<i>0.37</i>	<i>2.57</i>
Communist	0.147	0.076	0.080	0.178	-0.361	0.924	-0.089	-0.061	0.003	-0.014
	<i>5</i>	<i>3.6</i>	<i>1.16</i>	<i>2.42</i>	<i>-0.46</i>	<i>2.73</i>	<i>-0.37</i>	<i>-0.29</i>	<i>0.09</i>	<i>-0.66</i>
Vocational School	-0.057	-0.016	-0.128	-0.104	-0.634	-0.340	0.064	-0.139	-0.176	-0.107
	<i>-2.07</i>	<i>-0.59</i>	<i>-2.52</i>	<i>-1.62</i>	<i>-1.01</i>	<i>-0.68</i>	<i>0.29</i>	<i>-0.56</i>	<i>-3.64</i>	<i>-2.75</i>
Change in hukou	-0.065	0.043	-0.074	0.013	-1.802	-0.946	0.050	0.089	-0.087	0.032
	<i>-1.67</i>	<i>1.48</i>	<i>-1.25</i>	<i>0.17</i>	<i>-2.7</i>	<i>-1.6</i>	<i>0.28</i>	<i>0.45</i>	<i>-2.34</i>	<i>1.54</i>
Constant term	-0.138	-0.025	-0.139	-0.134	0.137	0.083	-0.756	-0.343	0.168	0.288
	<i>-1.54</i>	<i>-0.35</i>	<i>-0.92</i>	<i>-0.72</i>	<i>0.09</i>	<i>0.05</i>	<i>-1.62</i>	<i>-0.51</i>	<i>1.65</i>	<i>3.74</i>
# obs.	2551	3224	908	626	40	44	63	75	1445	1754
R²	0.21	0.20	0.19	0.19	0.53	0.35	0.35	0.21	0.25	0.26

Note: T-statistics in italics.

Appendix A2 - Hourly wage functions by ownership, Year: 2002

	SOEs		UCEs		PIEs		FIEs		GAIs	
	<i>Women</i>	<i>Men</i>	<i>Women</i>	<i>Men</i>	<i>Women</i>	<i>Men</i>	<i>Women</i>	<i>Men</i>	<i>Women</i>	<i>Men</i>
Education	0.041	0.044	0.034	0.018	0.117	0.096	0.052	0.103	0.068	0.048
	<i>4.95</i>	<i>7.26</i>	<i>2</i>	<i>0.98</i>	<i>5.06</i>	<i>6.35</i>	<i>2.29</i>	<i>4.24</i>	<i>10.71</i>	<i>9.33</i>
Work Exp.	0.061	0.045	0.040	0.048	0.019	0.048	0.051	0.043	0.050	0.037
	<i>5.82</i>	<i>7.43</i>	<i>2.52</i>	<i>2.91</i>	<i>1.11</i>	<i>3.27</i>	<i>1.76</i>	<i>2.12</i>	<i>6.48</i>	<i>6.65</i>
(Work Exp.)²	-0.0013	-0.0009	-0.0008	-0.0009	0.0000	-0.0006	-0.0013	-0.0004	-0.0009	-0.0005
	<i>-4.69</i>	<i>-5.97</i>	<i>-1.98</i>	<i>-2.63</i>	<i>0.08</i>	<i>-1.63</i>	<i>-1.51</i>	<i>-0.87</i>	<i>-4.33</i>	<i>-4.13</i>
Central Province	-0.112	-0.014	-0.192	0.061	-0.212	-0.151	0.476	0.263	-0.198	-0.102
	<i>-2.68</i>	<i>-0.46</i>	<i>-2.33</i>	<i>0.68</i>	<i>-2.11</i>	<i>-1.47</i>	<i>2.17</i>	<i>1.79</i>	<i>-5.44</i>	<i>-3.46</i>
Coastal Province	0.105	0.174	0.088	0.191	0.311	0.447	0.558	0.272	0.178	0.167
	<i>2.15</i>	<i>4.93</i>	<i>0.96</i>	<i>1.83</i>	<i>3.27</i>	<i>4.73</i>	<i>2.43</i>	<i>2.08</i>	<i>4.19</i>	<i>4.6</i>
Big city	0.176	0.109	0.132	0.278	0.297	0.374	0.174	0.210	-0.033	0.126
	<i>4.96</i>	<i>4.12</i>	<i>1.98</i>	<i>3.87</i>	<i>3.65</i>	<i>4.65</i>	<i>1.12</i>	<i>1.63</i>	<i>-0.97</i>	<i>4.47</i>
Communist	0.135	0.136	0.253	0.164	0.387	0.279	0.523	-0.138	0.052	0.116
	<i>3.08</i>	<i>4.54</i>	<i>2.73</i>	<i>2.06</i>	<i>3.25</i>	<i>3.16</i>	<i>2.65</i>	<i>-0.71</i>	<i>1.37</i>	<i>4.06</i>
Vocational School	0.094	0.052	0.133	0.135	-0.065	0.162	0.151	-0.135	0.021	0.004
	<i>1.84</i>	<i>1.55</i>	<i>1.22</i>	<i>1.11</i>	<i>-0.55</i>	<i>1.68</i>	<i>0.8</i>	<i>-0.87</i>	<i>0.59</i>	<i>0.14</i>
Change in hukou	-0.166	-0.077	-0.096	0.158	-0.190	0.058	0.254	0.039	0.043	0.065
	<i>-2.72</i>	<i>-1.74</i>	<i>-0.91</i>	<i>1.74</i>	<i>-1.35</i>	<i>0.39</i>	<i>0.84</i>	<i>0.24</i>	<i>0.85</i>	<i>2.14</i>
Constant term	0.203	0.394	0.246	0.198	-0.956	-1.071	-0.299	-0.399	0.247	0.539
	<i>1.69</i>	<i>3.99</i>	<i>1.14</i>	<i>0.73</i>	<i>-3.31</i>	<i>-5.02</i>	<i>-0.77</i>	<i>-1.16</i>	<i>2.24</i>	<i>5.55</i>
# obs.	1315	2056	383	295	781	986	86	125	1368	1686
R²	0.15	0.13	0.12	0.12	0.17	0.16	0.18	0.23	0.19	0.18

Note: T-statistics in italics.

Appendix A3 - Hourly wage functions by economic sector, Year: 1995

	Competitive		Oligopolistic		Public Services		Government	
	<i>Women</i>	<i>Men</i>	<i>Women</i>	<i>Men</i>	<i>Women</i>	<i>Men</i>	<i>Women</i>	<i>Men</i>
Education	0.017	0.023	0.043	0.056	0.026	0.021	0.019	0.011
	<i>3.62</i>	<i>5.12</i>	<i>2.22</i>	<i>3.35</i>	<i>4.04</i>	<i>3.1</i>	<i>1.65</i>	<i>2.07</i>
Work Exp.	0.058	0.045	0.064	0.059	0.052	0.059	0.044	0.032
	<i>9.33</i>	<i>11.3</i>	<i>4.03</i>	<i>5.01</i>	<i>6.74</i>	<i>6.06</i>	<i>3.51</i>	<i>4.41</i>
(Work Exp.)²	-0.0011	-0.0007	-0.0013	-0.0010	-0.0008	-0.0009	-0.0006	-0.0004
	<i>-6.2</i>	<i>-7.22</i>	<i>-2.65</i>	<i>-3.46</i>	<i>-4.51</i>	<i>-3.86</i>	<i>-2.09</i>	<i>-2.68</i>
Central Province	-0.035	-0.046	-0.080	-0.058	-0.104	-0.002	-0.102	-0.081
	<i>-1.39</i>	<i>-2.01</i>	<i>-0.76</i>	<i>-0.77</i>	<i>-3.03</i>	<i>-0.07</i>	<i>-1.99</i>	<i>-2.81</i>
Coastal Province	0.211	0.208	0.322	0.239	0.190	0.231	0.262	0.242
	<i>7.45</i>	<i>8.46</i>	<i>2.82</i>	<i>2.62</i>	<i>4.8</i>	<i>5.77</i>	<i>3.83</i>	<i>5.25</i>
Big city	0.159	0.159	0.136	-0.064	0.049	0.079	-0.099	0.078
	<i>7.9</i>	<i>8.19</i>	<i>1.63</i>	<i>-0.8</i>	<i>1.62</i>	<i>2.41</i>	<i>-1.81</i>	<i>2.29</i>
Communist	0.145	0.091	0.188	0.031	-0.002	0.003	0.073	0.023
	<i>4.89</i>	<i>4.19</i>	<i>1.79</i>	<i>0.4</i>	<i>-0.06</i>	<i>0.08</i>	<i>1.41</i>	<i>0.72</i>
Vocational School	-0.065	-0.055	-0.260	-0.088	-0.120	-0.195	-0.222	-0.025
	<i>-2.45</i>	<i>-2.03</i>	<i>-2.15</i>	<i>-0.84</i>	<i>-2.03</i>	<i>-2.88</i>	<i>-2.25</i>	<i>-0.51</i>
Change in hukou	-0.065	0.034	-0.204	0.030	-0.006	0.057	-0.228	-0.029
	<i>-1.64</i>	<i>1.17</i>	<i>-1.48</i>	<i>0.31</i>	<i>-0.13</i>	<i>1.54</i>	<i>-3.69</i>	<i>-1.01</i>
Constant term	-0.115	-0.002	-0.281	-0.292	0.052	0.014	0.215	0.402
	<i>-1.4</i>	<i>-0.03</i>	<i>-0.99</i>	<i>-1.2</i>	<i>0.47</i>	<i>0.11</i>	<i>1.06</i>	<i>3.69</i>
# obs.	3019	3324	312	295	791	675	477	772
R²	0.18	0.19	0.28	0.25	0.28	0.33	0.29	0.24

Note: T-statistics in italics.

Appendix A4 - Hourly wage functions by economic sector, Year: 2002

	Competitive		Oligopolistic		Public Services		Government	
	<i>Women</i>	<i>Men</i>	<i>Women</i>	<i>Men</i>	<i>Women</i>	<i>Men</i>	<i>Women</i>	<i>Men</i>
Education	0.071	0.071	0.043	0.036	0.068	0.058	0.054	0.031
	<i>7.42</i>	<i>9.82</i>	<i>2.12</i>	<i>2.56</i>	<i>7.32</i>	<i>6.63</i>	<i>3.81</i>	<i>3.94</i>
Work Exp.	0.056	0.049	0.098	0.042	0.046	0.042	0.065	0.036
	<i>6.66</i>	<i>6.81</i>	<i>4.93</i>	<i>3.1</i>	<i>4.34</i>	<i>4.48</i>	<i>4.82</i>	<i>3.69</i>
(Work Exp.)²	-0.0011	-0.0008	-0.0020	-0.0006	-0.0007	-0.0006	-0.0014	-0.0005
	<i>-4.4</i>	<i>-4.74</i>	<i>-3.74</i>	<i>-1.83</i>	<i>-2.72</i>	<i>-3.07</i>	<i>-3.88</i>	<i>-2.44</i>
Central Province	-0.116	-0.035	-0.296	-0.176	-0.260	-0.154	-0.151	-0.096
	<i>-2.57</i>	<i>-0.79</i>	<i>-3.25</i>	<i>-2.28</i>	<i>-4.85</i>	<i>-3.3</i>	<i>-1.91</i>	<i>-2.23</i>
Coastal Province	0.219	0.261	0.050	0.182	0.162	0.083	0.010	0.177
	<i>4.72</i>	<i>6.03</i>	<i>0.5</i>	<i>2.11</i>	<i>2.68</i>	<i>1.4</i>	<i>0.13</i>	<i>3.31</i>
Big city	0.173	0.320	0.246	0.009	0.081	0.165	-0.015	0.106
	<i>4.76</i>	<i>9.32</i>	<i>3.06</i>	<i>0.14</i>	<i>1.7</i>	<i>4.01</i>	<i>-0.24</i>	<i>2.52</i>
Communist	0.231	0.196	0.130	0.155	0.168	0.142	0.016	0.154
	<i>5.19</i>	<i>5.96</i>	<i>1.39</i>	<i>2.04</i>	<i>3.2</i>	<i>2.84</i>	<i>0.25</i>	<i>3.25</i>
Vocational School	0.073	0.042	0.018	0.172	0.030	0.023	0.078	-0.014
	<i>1.39</i>	<i>0.97</i>	<i>0.17</i>	<i>2.58</i>	<i>0.64</i>	<i>0.53</i>	<i>1.11</i>	<i>-0.37</i>
Change in hukou	-0.083	-0.021	-0.172	-0.022	-0.056	0.081	-0.100	0.065
	<i>-1.25</i>	<i>-0.33</i>	<i>-1.13</i>	<i>-0.26</i>	<i>-0.77</i>	<i>1.51</i>	<i>-0.9</i>	<i>1.62</i>
Constant term	-0.460	-0.437	0.099	0.674	0.294	0.439	0.377	0.732
	<i>-3.56</i>	<i>-3.73</i>	<i>0.34</i>	<i>3.09</i>	<i>1.86</i>	<i>2.68</i>	<i>1.65</i>	<i>4.58</i>
# obs.	2252	2500	293	413	775	785	424	753
R²	0.15	0.15	0.27	0.18	0.21	0.19	0.14	0.17

Note: T-statistics in italics.

Appendix A5 - Hourly wage functions by region, Year: 1995

	Coast		Centre		West		Municipality		North-East	
	<i>Women</i>	<i>Men</i>	<i>Women</i>	<i>Men</i>	<i>Women</i>	<i>Men</i>	<i>Women</i>	<i>Men</i>	<i>Women</i>	<i>Men</i>
Education	0.022	0.028	0.025	0.027	0.030	0.024	0.020	0.035	0.037	0.025
	<i>3.31</i>	<i>4.09</i>	<i>3.62</i>	<i>5.2</i>	<i>4.41</i>	<i>4.05</i>	<i>1.16</i>	<i>2.83</i>	<i>3.83</i>	<i>2.51</i>
Work Exp.	0.061	0.060	0.056	0.049	0.066	0.041	0.047	0.022	0.044	0.036
	<i>5.66</i>	<i>9.74</i>	<i>9.2</i>	<i>8.91</i>	<i>6.92</i>	<i>6.79</i>	<i>2.58</i>	<i>2.38</i>	<i>4.55</i>	<i>4.04</i>
(Work Exp.)²	-0.00129	-0.00107	-0.00092	-0.00068	-0.00110	-0.00047	-0.00076	-0.00030	-0.00079	-0.00052
	<i>-3.93</i>	<i>-7.81</i>	<i>-5.54</i>	<i>-5.39</i>	<i>-4.75</i>	<i>-3.64</i>	<i>-1.65</i>	<i>-1.54</i>	<i>-3.01</i>	<i>-2.46</i>
Big city	0.117	0.106	0.120	0.103	0.147	0.127	0.000	0.000	0.397	0.339
	<i>2.91</i>	<i>3.02</i>	<i>3.93</i>	<i>3.83</i>	<i>5</i>	<i>5.02</i>	<i>.</i>	<i>.</i>	<i>7.52</i>	<i>5.33</i>
Communist	0.202	0.161	0.102	0.073	0.061	0.007	0.149	0.103	0.074	0.095
	<i>3.64</i>	<i>4.62</i>	<i>2.77</i>	<i>2.86</i>	<i>1.7</i>	<i>0.29</i>	<i>2.64</i>	<i>2.09</i>	<i>1.43</i>	<i>1.77</i>
Vocational School	-0.157	-0.044	-0.124	-0.062	-0.099	-0.098	0.025	0.004	-0.127	-0.037
	<i>-3.32</i>	<i>-0.98</i>	<i>-3.19</i>	<i>-1.64</i>	<i>-2.36</i>	<i>-2.41</i>	<i>0.28</i>	<i>0.06</i>	<i>-2.32</i>	<i>-0.58</i>
Change in hukou	-0.119	-0.025	-0.077	0.056	-0.021	0.041	-0.115	-0.005	-0.095	0.098
	<i>-1.84</i>	<i>-0.61</i>	<i>-1.82</i>	<i>2.02</i>	<i>-0.4</i>	<i>1.19</i>	<i>-1</i>	<i>-0.06</i>	<i>-1.01</i>	<i>1.19</i>
Constant term	0.232	0.128	-0.164	-0.104	-0.292	0.050	0.163	0.427	-0.378	-0.097
	<i>2.21</i>	<i>1.18</i>	<i>-1.63</i>	<i>-1.26</i>	<i>-2.4</i>	<i>0.46</i>	<i>0.5</i>	<i>2.51</i>	<i>-2.53</i>	<i>-0.58</i>
# obs.	1017	1153	1745	2033	1438	1553	356	423	546	634
R²	0.16	0.21	0.19	0.18	0.20	0.21	0.15	0.10	0.27	0.16

Note: T-statistics in italics.

Appendix A6 - Hourly wage functions by region, Year: 2002

	Coast		Centre		West		Municipality		North-East	
	<i>Women</i>	<i>Men</i>	<i>Women</i>	<i>Men</i>	<i>Women</i>	<i>Men</i>	<i>Women</i>	<i>Men</i>	<i>Women</i>	<i>Men</i>
Education	0.099	0.074	0.092	0.083	0.078	0.088	0.080	0.075	0.119	0.069
	<i>8.15</i>	<i>8.86</i>	<i>8.52</i>	<i>10.08</i>	<i>9.04</i>	<i>11.93</i>	<i>4.34</i>	<i>5.28</i>	<i>4.77</i>	<i>5.83</i>
Work Exp.	0.069	0.051	0.053	0.040	0.051	0.060	0.061	0.050	0.013	0.018
	<i>5.77</i>	<i>5.12</i>	<i>4.42</i>	<i>4.62</i>	<i>4.96</i>	<i>5.99</i>	<i>3.83</i>	<i>4.28</i>	<i>0.97</i>	<i>1.85</i>
(Work Exp.)²	-0.00136	-0.00089	-0.00078	-0.00051	-0.00069	-0.00085	-0.00167	-0.00087	0.00016	-0.00018
	<i>-4.15</i>	<i>-3.92</i>	<i>-2.17</i>	<i>-2.5</i>	<i>-2.6</i>	<i>-3.71</i>	<i>-4.14</i>	<i>-3.2</i>	<i>0.46</i>	<i>-0.76</i>
Big city	0.198	0.327	0.122	0.134	0.111	0.232	0.000	0.000	0.101	0.160
	<i>3.28</i>	<i>7.16</i>	<i>2.63</i>	<i>3.26</i>	<i>2.51</i>	<i>5.52</i>	.	.	<i>1.15</i>	<i>2.05</i>
Communist	0.322	0.324	0.108	0.209	0.197	0.258	0.207	0.124	0.093	0.189
	<i>4.61</i>	<i>6.32</i>	<i>2.08</i>	<i>5.25</i>	<i>4.19</i>	<i>6.7</i>	<i>2.37</i>	<i>1.84</i>	<i>1</i>	<i>3.14</i>
Vocational School	0.109	0.017	0.162	0.070	0.157	0.132	-0.113	-0.104	0.097	0.072
	<i>1.54</i>	<i>0.29</i>	<i>3.06</i>	<i>1.79</i>	<i>2.89</i>	<i>3.34</i>	<i>-1.23</i>	<i>-1.37</i>	<i>1.16</i>	<i>1.21</i>
Change in hukou	-0.215	0.025	-0.051	0.050	0.098	0.048	0.014	0.117	0.205	0.019
	<i>-2.81</i>	<i>0.42</i>	<i>-0.67</i>	<i>1.05</i>	<i>1.27</i>	<i>0.76</i>	<i>0.06</i>	<i>1.1</i>	<i>1.68</i>	<i>0.14</i>
Constant term	-0.447	-0.021	-0.655	-0.337	-0.382	-0.631	0.096	0.211	-0.676	0.195
	<i>-2.49</i>	<i>-0.14</i>	<i>-4.07</i>	<i>-2.3</i>	<i>-2.7</i>	<i>-4.38</i>	<i>0.35</i>	<i>0.97</i>	<i>-1.88</i>	<i>1.1</i>
# obs.	818	994	1417	1883	1155	1421	367	432	431	619
R²	0.25	0.22	0.15	0.14	0.19	0.23	0.12	0.14	0.23	0.13

Note: T-statistics in italics.

Appendix B1 - Hours worked functions by ownership, Year: 1995

	SOEs		UCEs		PIEs		FIEs		GAIs	
	<i>Women</i>	<i>Men</i>	<i>Women</i>	<i>Men</i>	<i>Women</i>	<i>Men</i>	<i>Women</i>	<i>Men</i>	<i>Women</i>	<i>Men</i>
Education	-0.189	7.237	4.002	-30.707	42.989	-57.875	7.051	-111.28	1.223	6.970
	<i>-0.05</i>	<i>1.41</i>	<i>0.21</i>	<i>-1.85</i>	<i>0.29</i>	<i>-0.69</i>	<i>0.28</i>	<i>-2.03</i>	<i>0.24</i>	<i>1.26</i>
Age	-12.75	2.60	-16.21	-64.51	-63.88	-369.23	16.64	-3.49	9.42	5.11
	<i>-1.36</i>	<i>0.34</i>	<i>-0.73</i>	<i>-2.75</i>	<i>-0.43</i>	<i>-2.80</i>	<i>0.26</i>	<i>-0.08</i>	<i>1.06</i>	<i>0.55</i>
(Age)²	0.151	-0.052	0.243	0.783	0.983	4.531	-0.341	0.215	-0.118	-0.083
	<i>1.20</i>	<i>-0.58</i>	<i>0.81</i>	<i>2.62</i>	<i>0.47</i>	<i>3.06</i>	<i>-0.42</i>	<i>0.37</i>	<i>-1.02</i>	<i>-0.78</i>
Communist	3.68	52.24	-38.94	-55.99	369.48	-1011.9	-54.86	249.54	10.27	36.67
	<i>0.19</i>	<i>3.48</i>	<i>-0.61</i>	<i>-0.89</i>	<i>0.70</i>	<i>-3.41</i>	<i>-0.28</i>	<i>1.28</i>	<i>0.55</i>	<i>2.05</i>
Married	-20.16	65.44	-113.11	103.73	495.47	986.98	-48.33	-164.16	18.27	-22.27
	<i>-0.62</i>	<i>1.70</i>	<i>-1.52</i>	<i>1.00</i>	<i>1.47</i>	<i>2.17</i>	<i>-0.20</i>	<i>-0.78</i>	<i>0.39</i>	<i>-0.35</i>
Square root of household size	807.2	-551.2	-1215.6	-13.3	7546.3	11043.6	-716.1	733.2	311.8	-85.2
	<i>2.60</i>	<i>-1.55</i>	<i>-1.61</i>	<i>-0.02</i>	<i>0.88</i>	<i>3.46</i>	<i>-0.22</i>	<i>0.22</i>	<i>0.81</i>	<i>-0.21</i>
Dependent elderly in the household	26.23	31.33	8.45	45.34	-115.39	103.58	-82.00	230.73	-29.49	-9.02
	<i>0.81</i>	<i>1.55</i>	<i>0.17</i>	<i>0.59</i>	<i>-0.24</i>	<i>0.50</i>	<i>-0.69</i>	<i>1.19</i>	<i>-1.06</i>	<i>-0.23</i>
Household size	-184.5	153.6	347.3	66.8	-1728.1	-2544.8	316.8	-228.1	-67.0	23.5
	<i>-2.27</i>	<i>1.62</i>	<i>1.75</i>	<i>0.30</i>	<i>-0.77</i>	<i>-3.46</i>	<i>0.36</i>	<i>-0.26</i>	<i>-0.65</i>	<i>0.22</i>
Average education of adult hh members	-6.46	-13.80	-18.13	5.13	-27.79	17.09	-42.88	39.56	2.54	2.59
	<i>-1.37</i>	<i>-2.83</i>	<i>-1.37</i>	<i>0.38</i>	<i>-0.35</i>	<i>0.34</i>	<i>-1.50</i>	<i>1.00</i>	<i>0.47</i>	<i>0.36</i>
Average age of adult hh members	-1.348	-2.475	-3.439	-4.821	-1.084	33.592	8.252	-18.644	0.997	1.757
	<i>-1.03</i>	<i>-1.59</i>	<i>-0.98</i>	<i>-1.28</i>	<i>-0.05</i>	<i>1.78</i>	<i>0.89</i>	<i>-1.69</i>	<i>0.68</i>	<i>0.78</i>
Child of hh head	-17.95	57.97	-138.23	-85.63	654.07	-262.67	-176.79	357.07	47.94	-2.05
	<i>-0.43</i>	<i>1.38</i>	<i>-1.64</i>	<i>-0.78</i>	<i>1.42</i>	<i>-0.50</i>	<i>-0.79</i>	<i>1.36</i>	<i>1.05</i>	<i>-0.03</i>
Vocational school	-6.43	23.27	63.22	-99.56	353.90	515.52	280.08	-205.21	41.84	99.81
	<i>-0.37</i>	<i>1.13</i>	<i>0.99</i>	<i>-1.39</i>	<i>0.62</i>	<i>1.43</i>	<i>1.29</i>	<i>-1.13</i>	<i>1.56</i>	<i>3.33</i>
Change in hukou	12.79	47.83	41.07	-18.35	-95.82	295.29	-197.25	114.39	-39.35	-10.16
	<i>0.55</i>	<i>2.14</i>	<i>0.70</i>	<i>-0.29</i>	<i>-0.24</i>	<i>0.74</i>	<i>-1.41</i>	<i>0.83</i>	<i>-1.68</i>	<i>-0.48</i>
Big city	-13.01	-40.41	-79.68	-58.00	-474.62	-607.03	-47.13	-15.81	-22.34	17.43
	<i>-1.02</i>	<i>-2.96</i>	<i>-2.55</i>	<i>-1.25</i>	<i>-1.38</i>	<i>-2.34</i>	<i>-0.36</i>	<i>-0.15</i>	<i>-1.32</i>	<i>0.90</i>
Coastal Province	-23.659	-0.631	91.032	-9.099	-149.21	259.689	33.716	234.191	-21.663	-58.345
	<i>-1.33</i>	<i>-0.03</i>	<i>2.00</i>	<i>-0.18</i>	<i>-0.51</i>	<i>0.84</i>	<i>0.24</i>	<i>1.06</i>	<i>-0.93</i>	<i>-2.35</i>
Central Province	-37.467	-31.587	23.360	-25.180	475.089	-70.934	-50.924	-147.87	4.407	-13.147
	<i>-2.65</i>	<i>-1.99</i>	<i>0.58</i>	<i>-0.45</i>	<i>1.31</i>	<i>-0.18</i>	<i>-0.25</i>	<i>-0.67</i>	<i>0.25</i>	<i>-0.66</i>
Constant term	1787.6	2814.6	3811.6	3710.3	-4966.1	-3184.6	2564.1	2965.1	1554.0	2043.4
	<i>5.25</i>	<i>7.79</i>	<i>4.32</i>	<i>4.28</i>	<i>-0.52</i>	<i>-0.75</i>	<i>0.93</i>	<i>0.85</i>	<i>3.85</i>	<i>5.11</i>
# obs.	2551	3224	908	626	40	44	63	75	1445	1754
R²	0.02	0.02	0.03	0.05	0.35	0.66	0.32	0.32	0.01	0.01

Note: T-statistics in italics.

Appendix B2 - Hours worked functions by ownership, Year: 2002

	SOEs		UCEs		PIEs		FIEs		GAIs	
	<i>Women</i>	<i>Men</i>	<i>Women</i>	<i>Men</i>	<i>Women</i>	<i>Men</i>	<i>Women</i>	<i>Men</i>	<i>Women</i>	<i>Men</i>
Education	-2.623	-6.517	7.968	-17.404	-26.030	-34.807	-87.406	-34.854	-6.396	3.376
	<i>-0.39</i>	<i>-1.03</i>	<i>0.52</i>	<i>-0.84</i>	<i>-1.60</i>	<i>-2.64</i>	<i>-1.94</i>	<i>-1.32</i>	<i>-0.97</i>	<i>0.58</i>
Age	-33.04	14.01	13.23	9.14	-27.65	-25.44	13.24	-41.59	-12.15	0.12
	<i>-2.18</i>	<i>1.35</i>	<i>0.40</i>	<i>0.27</i>	<i>-0.99</i>	<i>-0.94</i>	<i>0.18</i>	<i>-0.84</i>	<i>-0.94</i>	<i>0.01</i>
(Age)²	0.417	-0.182	-0.240	-0.301	0.429	0.273	-0.180	0.527	0.109	0.015
	<i>2.16</i>	<i>-1.52</i>	<i>-0.55</i>	<i>-0.71</i>	<i>1.11</i>	<i>0.84</i>	<i>-0.18</i>	<i>0.90</i>	<i>0.65</i>	<i>0.10</i>
Communist	43.55	-18.48	-123.21	5.04	-94.20	-188.15	-37.36	-51.00	-5.31	-11.22
	<i>1.77</i>	<i>-0.92</i>	<i>-1.97</i>	<i>0.06</i>	<i>-1.17</i>	<i>-3.25</i>	<i>-0.28</i>	<i>-0.47</i>	<i>-0.25</i>	<i>-0.54</i>
Married	-41.46	74.44	-121.30	1.98	89.66	11.47	143.08	68.85	28.94	45.58
	<i>-0.89</i>	<i>1.27</i>	<i>-0.94</i>	<i>0.02</i>	<i>0.77</i>	<i>0.08</i>	<i>0.54</i>	<i>0.41</i>	<i>0.65</i>	<i>1.10</i>
Square root of household size	830.6	326.9	-11.4	-283.1	-649.2	-2062.2	-3905.6	1659.4	335.0	173.4
	<i>1.49</i>	<i>0.64</i>	<i>-0.01</i>	<i>-0.20</i>	<i>-0.49</i>	<i>-1.66</i>	<i>-1.30</i>	<i>0.62</i>	<i>0.92</i>	<i>0.41</i>
Dependent elderly in the household	26.26	-9.56	-137.58	-45.28	30.03	-22.32	-472.73	-178.08	-5.97	-24.96
	<i>0.64</i>	<i>-0.24</i>	<i>-2.10</i>	<i>-0.45</i>	<i>0.39</i>	<i>-0.31</i>	<i>-1.73</i>	<i>-1.18</i>	<i>-0.17</i>	<i>-0.76</i>
Household size	-195.6	-71.8	2.5	131.1	224.2	595.5	1183.7	-434.7	-92.2	-73.2
	<i>-1.27</i>	<i>-0.50</i>	<i>0.01</i>	<i>0.36</i>	<i>0.61</i>	<i>1.78</i>	<i>1.40</i>	<i>-0.60</i>	<i>-0.95</i>	<i>-0.66</i>
Average education of adult hh members	-4.20	0.54	-12.69	1.53	-13.37	-5.80	36.21	-18.39	-0.33	-9.18
	<i>-0.53</i>	<i>0.08</i>	<i>-0.72</i>	<i>0.06</i>	<i>-0.80</i>	<i>-0.37</i>	<i>0.72</i>	<i>-0.55</i>	<i>-0.05</i>	<i>-1.34</i>
Average age of adult hh members	-0.694	0.007	7.532	8.863	-9.613	-6.966	-3.581	-14.226	2.493	-3.547
	<i>-0.28</i>	<i>0.00</i>	<i>1.65</i>	<i>1.35</i>	<i>-1.75</i>	<i>-1.50</i>	<i>-0.21</i>	<i>-1.54</i>	<i>1.26</i>	<i>-1.74</i>
Child of hh head	34.37	53.30	-2.65	-340.70	163.02	-55.38	433.34	250.16	-57.24	126.82
	<i>0.50</i>	<i>0.85</i>	<i>-0.02</i>	<i>-2.33</i>	<i>1.19</i>	<i>-0.48</i>	<i>0.93</i>	<i>1.07</i>	<i>-1.07</i>	<i>2.53</i>
Vocational school	-68.22	6.03	-41.95	-82.20	-64.17	-64.33	-60.35	133.34	-16.86	-27.71
	<i>-2.56</i>	<i>0.27</i>	<i>-0.62</i>	<i>-0.90</i>	<i>-0.96</i>	<i>-1.05</i>	<i>-0.48</i>	<i>1.30</i>	<i>-0.81</i>	<i>-1.41</i>
Change in hukou	49.48	90.66	102.41	118.24	168.87	104.17	-138.86	343.96	32.29	6.76
	<i>1.08</i>	<i>2.67</i>	<i>1.07</i>	<i>1.24</i>	<i>1.96</i>	<i>1.19</i>	<i>-0.70</i>	<i>1.32</i>	<i>1.06</i>	<i>0.29</i>
Big city	-16.38	-10.46	-122.68	-64.23	-23.11	-109.65	-130.13	-108.69	48.57	15.15
	<i>-0.74</i>	<i>-0.54</i>	<i>-2.35</i>	<i>-1.01</i>	<i>-0.40</i>	<i>-2.12</i>	<i>-0.85</i>	<i>-1.11</i>	<i>2.13</i>	<i>0.67</i>
Coastal Province	-124.08	-6.923	70.339	-23.539	-119.96	-117.79	169.409	-120.25	-79.970	14.648
	<i>-4.29</i>	<i>-0.26</i>	<i>0.97</i>	<i>-0.23</i>	<i>-1.81</i>	<i>-1.94</i>	<i>0.77</i>	<i>-0.66</i>	<i>-3.14</i>	<i>0.51</i>
Central Province	-13.107	10.842	155.477	-22.931	27.400	65.043	99.163	-255.05	19.988	16.797
	<i>-0.48</i>	<i>0.49</i>	<i>2.48</i>	<i>-0.26</i>	<i>0.42</i>	<i>1.06</i>	<i>0.50</i>	<i>-1.55</i>	<i>0.84</i>	<i>0.79</i>
Constant term	2094.7	1561.8	1899.7	2493.8	3984.6	5691.7	5808.3	2661.1	2058.0	2167.1
	<i>3.68</i>	<i>3.01</i>	<i>1.77</i>	<i>1.64</i>	<i>3.02</i>	<i>4.66</i>	<i>2.25</i>	<i>0.97</i>	<i>5.11</i>	<i>4.18</i>
# obs.	1315	2056	383	295	781	986	86	125	1368	1686
R²	0.05	0.01	0.07	0.04	0.06	0.08	0.29	0.22	0.02	0.01

Note: T-statistics in italics.

Appendix B3 - Hours worked functions by economic sector, Year: 1995

	Competitive		Oligopolistic		Public Services		Government	
	<i>Women</i>	<i>Men</i>	<i>Women</i>	<i>Men</i>	<i>Women</i>	<i>Men</i>	<i>Women</i>	<i>Men</i>
Education	-3.304	0.331	3.612	-38.315	-3.807	2.302	11.438	10.413
	<i>-0.51</i>	<i>0.06</i>	<i>0.26</i>	<i>-1.50</i>	<i>-0.52</i>	<i>0.28</i>	<i>1.66</i>	<i>1.09</i>
Age	-11.48	-3.88	-29.77	-10.85	14.21	19.11	3.28	-14.77
	<i>-1.07</i>	<i>-0.47</i>	<i>-1.30</i>	<i>-0.40</i>	<i>1.05</i>	<i>1.14</i>	<i>0.22</i>	<i>-1.00</i>
(Age)²	0.137	0.029	0.464	0.205	-0.198	-0.219	-0.026	0.074
	<i>0.94</i>	<i>0.29</i>	<i>1.55</i>	<i>0.61</i>	<i>-1.13</i>	<i>-1.14</i>	<i>-0.12</i>	<i>0.43</i>
Communist	-17.45	19.14	3.37	14.31	11.33	38.76	17.16	67.69
	<i>-0.82</i>	<i>1.18</i>	<i>0.04</i>	<i>0.30</i>	<i>0.44</i>	<i>1.22</i>	<i>0.58</i>	<i>2.32</i>
Married	-65.51	76.88	-105.26	-325.50	-30.87	-78.56	20.32	225.64
	<i>-1.93</i>	<i>1.91</i>	<i>-1.30</i>	<i>-1.94</i>	<i>-0.50</i>	<i>-0.92</i>	<i>0.42</i>	<i>1.46</i>
Square root of household size	336.5	-591.5	-1334.6	-519.1	-137.5	-644.0	-105.1	913.7
	<i>1.00</i>	<i>-1.66</i>	<i>-1.22</i>	<i>-0.77</i>	<i>-0.28</i>	<i>-1.05</i>	<i>-0.18</i>	<i>1.16</i>
Dependent elderly in the household	3.79	14.27	83.33	34.58	-31.20	36.01	-71.99	-92.81
	<i>0.13</i>	<i>0.53</i>	<i>1.82</i>	<i>0.51</i>	<i>-0.63</i>	<i>0.72</i>	<i>-1.79</i>	<i>-1.49</i>
Household size	-57.3	177.4	397.3	136.5	74.5	201.4	20.9	-229.2
	<i>-0.64</i>	<i>1.87</i>	<i>1.34</i>	<i>0.80</i>	<i>0.58</i>	<i>1.23</i>	<i>0.13</i>	<i>-1.14</i>
Average education of adult hh members	-5.57	-10.22	-10.27	3.90	1.92	15.82	-8.99	-2.01
	<i>-1.00</i>	<i>-2.01</i>	<i>-0.79</i>	<i>0.21</i>	<i>0.25</i>	<i>1.42</i>	<i>-1.01</i>	<i>-0.19</i>
Average age of adult hh members	-1.065	-1.728	-9.993	-7.324	2.816	0.062	-0.033	6.875
	<i>-0.68</i>	<i>-1.13</i>	<i>-2.69</i>	<i>-1.66</i>	<i>1.34</i>	<i>0.02</i>	<i>-0.01</i>	<i>1.87</i>
Child of hh head	-72.49	64.99	-15.21	-149.58	2.53	-16.50	61.38	28.96
	<i>-1.66</i>	<i>1.41</i>	<i>-0.16</i>	<i>-1.14</i>	<i>0.04</i>	<i>-0.18</i>	<i>0.94</i>	<i>0.18</i>
Vocational school	17.95	12.59	37.77	-83.85	-1.83	166.32	47.46	85.32
	<i>0.75</i>	<i>0.60</i>	<i>0.62</i>	<i>-0.90</i>	<i>-0.05</i>	<i>2.50</i>	<i>0.99</i>	<i>1.58</i>
Change in hukou	1.91	32.19	93.33	43.52	-48.79	-1.20	17.12	-11.46
	<i>0.07</i>	<i>1.40</i>	<i>1.30</i>	<i>0.62</i>	<i>-1.38</i>	<i>-0.03</i>	<i>0.47</i>	<i>-0.33</i>
Big city	-31.47	-59.26	-49.41	108.56	-38.72	13.83	20.12	27.52
	<i>-2.32</i>	<i>-3.99</i>	<i>-1.01</i>	<i>1.93</i>	<i>-1.77</i>	<i>0.47</i>	<i>0.67</i>	<i>0.84</i>
Coastal Province	32.838	29.734	58.594	-2.980	-37.314	-84.781	-9.381	-39.783
	<i>1.94</i>	<i>1.96</i>	<i>1.08</i>	<i>-0.05</i>	<i>-1.42</i>	<i>-2.64</i>	<i>-0.29</i>	<i>-1.18</i>
Constant term	2217.1	2921.8	4225.6	3748.1	1927.7	2142.5	2138.6	1197.0
	<i>5.68</i>	<i>8.07</i>	<i>3.79</i>	<i>5.05</i>	<i>3.59</i>	<i>3.46</i>	<i>4.00</i>	<i>1.55</i>
# obs.	3019	3324	312	295	791	675	477	772
R²	0.02	0.03	0.08	0.08	0.02	0.03	0.01	0.03

Note: T-statistics in italics.

Appendix B4 - Hours worked functions by economic sector, Year: 2002

	Competitive		Oligopolistic		Public Services		Government	
	<i>Women</i>	<i>Men</i>	<i>Women</i>	<i>Men</i>	<i>Women</i>	<i>Men</i>	<i>Women</i>	<i>Men</i>
Education	-18.246	-19.778	10.465	-4.982	12.067	3.859	-6.475	-10.598
	<i>-2.17</i>	<i>-2.71</i>	<i>0.79</i>	<i>-0.42</i>	<i>1.17</i>	<i>0.36</i>	<i>-0.82</i>	<i>-1.42</i>
Age	-24.89	-22.42	9.52	17.11	-12.38	-9.83	-54.07	2.19
	<i>-1.63</i>	<i>-1.55</i>	<i>0.39</i>	<i>0.82</i>	<i>-0.66</i>	<i>-0.45</i>	<i>-2.03</i>	<i>0.15</i>
(Age)²	0.316	0.225	-0.222	-0.192	0.141	0.154	0.654	-0.069
	<i>1.57</i>	<i>1.34</i>	<i>-0.71</i>	<i>-0.78</i>	<i>0.56</i>	<i>0.58</i>	<i>1.86</i>	<i>-0.41</i>
Communist	-37.99	-102.61	-27.80	-50.79	-57.21	-36.28	53.95	-7.25
	<i>-1.25</i>	<i>-3.97</i>	<i>-0.72</i>	<i>-1.06</i>	<i>-1.79</i>	<i>-1.15</i>	<i>1.45</i>	<i>-0.23</i>
Married	-74.71	10.93	132.44	78.83	24.66	10.40	9.74	68.10
	<i>-1.46</i>	<i>0.16</i>	<i>1.23</i>	<i>0.65</i>	<i>0.34</i>	<i>0.13</i>	<i>0.12</i>	<i>1.34</i>
Square root of household size	-687.2	-1640.7	1453.9	2061.1	1027.8	-605.5	-227.0	976.3
	<i>-1.08</i>	<i>-2.23</i>	<i>1.95</i>	<i>1.92</i>	<i>1.78</i>	<i>-0.62</i>	<i>-0.32</i>	<i>2.05</i>
Dependent elderly in the household	-65.03	-45.31	-91.37	-8.25	78.14	-7.88	-21.70	-34.08
	<i>-1.65</i>	<i>-1.05</i>	<i>-1.20</i>	<i>-0.10</i>	<i>1.04</i>	<i>-0.13</i>	<i>-0.39</i>	<i>-0.80</i>
Household size	241.2	478.7	-366.0	-501.1	-326.6	124.4	122.7	-269.6
	<i>1.34</i>	<i>2.36</i>	<i>-1.89</i>	<i>-1.73</i>	<i>-2.05</i>	<i>0.46</i>	<i>0.65</i>	<i>-2.25</i>
Average education of adult hh members	-12.06	-8.60	-2.25	18.66	-16.46	-10.66	4.33	-2.51
	<i>-1.38</i>	<i>-0.99</i>	<i>-0.17</i>	<i>1.31</i>	<i>-1.28</i>	<i>-0.86</i>	<i>0.38</i>	<i>-0.27</i>
Average age of adult hh members	-5.105	-5.044	6.682	1.035	0.912	-5.934	3.568	1.217
	<i>-1.89</i>	<i>-1.97</i>	<i>1.53</i>	<i>0.22</i>	<i>0.24</i>	<i>-1.79</i>	<i>0.83</i>	<i>0.46</i>
Child of hh head	75.25	-21.98	89.46	107.29	-80.34	98.08	-137.99	20.41
	<i>1.18</i>	<i>-0.28</i>	<i>0.71</i>	<i>0.93</i>	<i>-0.87</i>	<i>1.01</i>	<i>-1.24</i>	<i>0.28</i>
Vocational school	-50.17	10.25	-41.33	-66.01	-57.01	-63.16	56.49	15.47
	<i>-1.70</i>	<i>0.33</i>	<i>-0.85</i>	<i>-1.55</i>	<i>-1.96</i>	<i>-2.12</i>	<i>1.40</i>	<i>0.54</i>
Change in hukou	100.93	86.65	5.47	66.39	73.87	45.76	14.87	-9.52
	<i>2.11</i>	<i>2.08</i>	<i>0.07</i>	<i>1.10</i>	<i>1.61</i>	<i>1.16</i>	<i>0.38</i>	<i>-0.30</i>
Big city	-46.82	-134.44	-17.01	62.16	14.50	-21.55	-23.12	47.72
	<i>-1.76</i>	<i>-5.50</i>	<i>-0.37</i>	<i>1.23</i>	<i>0.49</i>	<i>-0.65</i>	<i>-0.57</i>	<i>1.41</i>
Coastal Province	-130.508	-39.563	-81.650	-87.988	-82.749	43.092	-10.280	-10.137
	<i>-5.14</i>	<i>-1.57</i>	<i>-1.90</i>	<i>-1.89</i>	<i>-2.49</i>	<i>1.00</i>	<i>-0.22</i>	<i>-0.27</i>
Constant term	3830.3	4837.8	227.9	-503.7	1625.9	3249.3	2991.9	1344.0
	<i>6.01</i>	<i>6.72</i>	<i>0.25</i>	<i>-0.46</i>	<i>2.44</i>	<i>3.15</i>	<i>4.46</i>	<i>2.38</i>
# obs.	2252	2500	293	413	775	785	424	753
R²	0.06	0.06	0.07	0.05	0.03	0.02	0.04	0.02

Note: T-statistics in italics.

Appendix B5 - Hours worked functions by region, Year: 1995

	Coast		Centre		West		Municipality		North-East	
	<i>Women</i>	<i>Men</i>	<i>Women</i>	<i>Men</i>	<i>Women</i>	<i>Men</i>	<i>Women</i>	<i>Men</i>	<i>Women</i>	<i>Men</i>
Education	-6.264	-23.347	7.369	6.381	5.667	7.753	9.641	0.575	-18.242	8.579
	<i>-0.57</i>	<i>-2.69</i>	<i>1.00</i>	<i>1.08</i>	<i>0.76</i>	<i>1.02</i>	<i>0.94</i>	<i>0.04</i>	<i>-1.64</i>	<i>0.80</i>
Age	-11.534	6.296	-19.792	-19.536	6.024	8.235	-20.964	39.445	2.323	-11.361
	<i>-0.72</i>	<i>0.49</i>	<i>-1.77</i>	<i>-1.89</i>	<i>0.48</i>	<i>0.77</i>	<i>-1.72</i>	<i>1.43</i>	<i>0.10</i>	<i>-0.53</i>
(Age)²	0.174	-0.081	0.249	0.238	-0.089	-0.125	0.231	-0.481	-0.025	0.143
	<i>0.79</i>	<i>-0.55</i>	<i>1.69</i>	<i>1.89</i>	<i>-0.51</i>	<i>-0.98</i>	<i>1.41</i>	<i>-1.65</i>	<i>-0.09</i>	<i>0.54</i>
Communist	-69.536	-36.777	-20.465	35.000	0.357	56.788	92.100	82.706	22.086	-5.994
	<i>-1.75</i>	<i>-1.36</i>	<i>-0.84</i>	<i>1.79</i>	<i>0.02</i>	<i>2.81</i>	<i>2.11</i>	<i>1.67</i>	<i>0.50</i>	<i>-0.15</i>
Married	-31.415	-23.390	-51.422	93.395	-50.179	66.056	10.205	-34.288	-14.583	62.072
	<i>-0.50</i>	<i>-0.32</i>	<i>-1.08</i>	<i>1.57</i>	<i>-1.01</i>	<i>1.16</i>	<i>0.26</i>	<i>-0.20</i>	<i>-0.19</i>	<i>0.84</i>
Square root of household size	-892.9	-821.5	869.8	-252.3	816.7	231.8	440.8	-1325.6	-773.4	-1775.1
	<i>-1.97</i>	<i>-1.54</i>	<i>1.64</i>	<i>-0.55</i>	<i>2.01</i>	<i>0.56</i>	<i>0.74</i>	<i>-0.95</i>	<i>-1.03</i>	<i>-1.69</i>
Dependent elderly in the household	-50.132	-6.811	-10.238	7.812	61.673	21.094	50.098	24.713	15.994	-9.675
	<i>-1.30</i>	<i>-0.15</i>	<i>-0.29</i>	<i>0.24</i>	<i>1.54</i>	<i>0.56</i>	<i>1.73</i>	<i>0.43</i>	<i>0.15</i>	<i>-0.19</i>
Household size	291.4	236.6	-213.7	60.9	-195.6	-44.2	-138.1	341.1	266.3	492.1
	<i>2.39</i>	<i>1.66</i>	<i>-1.56</i>	<i>0.51</i>	<i>-1.81</i>	<i>-0.41</i>	<i>-0.87</i>	<i>0.93</i>	<i>1.26</i>	<i>1.79</i>
Average education of adult hh members	-10.829	1.177	-5.540	-8.647	-9.496	-14.536	-13.949	8.784	7.141	-6.209
	<i>-1.22</i>	<i>0.13</i>	<i>-0.76</i>	<i>-1.35</i>	<i>-1.51</i>	<i>-2.25</i>	<i>-1.55</i>	<i>0.50</i>	<i>0.52</i>	<i>-0.50</i>
Average age of adult hh members	0.477	-1.544	-1.936	-3.920	0.313	-0.090	-2.366	0.689	-0.421	-0.083
	<i>0.19</i>	<i>-0.71</i>	<i>-0.91</i>	<i>-1.82</i>	<i>0.16</i>	<i>-0.04</i>	<i>-1.12</i>	<i>0.14</i>	<i>-0.14</i>	<i>-0.02</i>
Child of hh head	75.484	148.396	-87.927	130.582	-38.511	43.248	-80.981	33.353	0.554	-26.255
	<i>1.23</i>	<i>1.85</i>	<i>-1.52</i>	<i>2.00</i>	<i>-0.61</i>	<i>0.58</i>	<i>-2.03</i>	<i>0.26</i>	<i>0.01</i>	<i>-0.30</i>
Vocational school	58.201	-44.194	51.005	78.304	21.001	37.609	-28.868	-29.766	5.420	52.365
	<i>1.17</i>	<i>-1.18</i>	<i>1.75</i>	<i>2.77</i>	<i>0.77</i>	<i>1.02</i>	<i>-0.64</i>	<i>-0.52</i>	<i>0.16</i>	<i>1.19</i>
Change in hukou	30.322	44.688	31.066	23.456	-38.681	-9.469	-109.763	101.950	22.055	-3.420
	<i>0.73</i>	<i>1.38</i>	<i>0.98</i>	<i>0.93</i>	<i>-1.30</i>	<i>-0.35</i>	<i>-1.85</i>	<i>1.06</i>	<i>0.57</i>	<i>-0.05</i>
Big city	-49.381	-42.404	-26.139	-13.340	-29.187	-17.176	-	-	-60.718	-99.489
	<i>-1.91</i>	<i>-1.67</i>	<i>-1.29</i>	<i>-0.72</i>	<i>-1.56</i>	<i>-0.76</i>	<i>-</i>	<i>-</i>	<i>-2.19</i>	<i>-2.25</i>
Constant term	3227.2	3156.1	1788.4	2880.1	1371.2	1843.8	2418.4	2631.6	2857.8	3993.7
	<i>6.16</i>	<i>5.55</i>	<i>3.29</i>	<i>6.55</i>	<i>3.01</i>	<i>4.04</i>	<i>4.27</i>	<i>2.17</i>	<i>3.51</i>	<i>3.82</i>
# obs.	1017	1153	1745	2033	1438	1553	356	423	546	634
R²	0.07	0.07	0.01	0.02	0.02	0.02	0.06	0.03	0.05	0.03

Note: T-statistics in italics.

Appendix B6 - Hours worked functions by region, Year: 2002

	Coast		Centre		West		Municipality		North-East	
	<i>Women</i>	<i>Men</i>	<i>Women</i>	<i>Men</i>	<i>Women</i>	<i>Men</i>	<i>Women</i>	<i>Men</i>	<i>Women</i>	<i>Men</i>
Education	-24.680	-15.043	-29.159	-16.376	-1.805	-22.933	12.724	-32.527	-27.263	-7.632
	<i>-1.76</i>	<i>-1.27</i>	<i>-3.02</i>	<i>-1.96</i>	<i>-0.20</i>	<i>-3.03</i>	<i>0.96</i>	<i>-2.51</i>	<i>-2.00</i>	<i>-0.71</i>
Age	-32.931	-8.793	-30.722	15.195	-28.039	-40.128	-27.231	1.933	-15.592	4.233
	<i>-1.39</i>	<i>-0.37</i>	<i>-1.47</i>	<i>0.93</i>	<i>-1.41</i>	<i>-2.11</i>	<i>-1.04</i>	<i>0.10</i>	<i>-0.57</i>	<i>0.16</i>
(Age)²	0.385	0.045	0.377	-0.175	0.373	0.429	0.129	-0.072	0.237	-0.104
	<i>1.25</i>	<i>0.16</i>	<i>1.31</i>	<i>-0.89</i>	<i>1.45</i>	<i>1.99</i>	<i>0.41</i>	<i>-0.32</i>	<i>0.71</i>	<i>-0.36</i>
Communist	-28.556	-86.791	-27.940	-122.885	-58.873	-123.171	20.700	30.892	-107.644	-79.280
	<i>-0.72</i>	<i>-2.11</i>	<i>-0.87</i>	<i>-4.67</i>	<i>-1.88</i>	<i>-4.36</i>	<i>0.39</i>	<i>0.59</i>	<i>-2.08</i>	<i>-1.93</i>
Married	32.192	47.179	-36.532	33.559	-47.063	19.562	171.904	-94.527	11.022	-73.636
	<i>0.36</i>	<i>0.50</i>	<i>-0.52</i>	<i>0.45</i>	<i>-0.68</i>	<i>0.19</i>	<i>1.39</i>	<i>-0.87</i>	<i>0.11</i>	<i>-0.43</i>
Square root of household size	-559.1	513.4	-154.5	-490.2	850.9	-975.2	-1008.2	390.0	-1777.0	-1902.1
	<i>-0.70</i>	<i>0.63</i>	<i>-0.18</i>	<i>-0.64</i>	<i>1.20</i>	<i>-0.92</i>	<i>-0.66</i>	<i>0.43</i>	<i>-1.39</i>	<i>-1.33</i>
Dependent elderly in the household	-84.368	-93.597	-11.294	-64.155	-62.999	20.735	-38.608	146.980	51.046	26.550
	<i>-1.39</i>	<i>-1.64</i>	<i>-0.22</i>	<i>-1.44</i>	<i>-1.10</i>	<i>0.28</i>	<i>-0.62</i>	<i>1.52</i>	<i>0.78</i>	<i>0.44</i>
Household size	176.2	-105.7	83.4	148.4	-191.9	286.9	221.3	-110.7	479.5	521.5
	<i>0.84</i>	<i>-0.48</i>	<i>0.35</i>	<i>0.71</i>	<i>-0.89</i>	<i>0.98</i>	<i>0.60</i>	<i>-0.45</i>	<i>1.40</i>	<i>1.32</i>
Average education of adult hh members	0.906	-17.912	2.403	-9.288	-27.228	-11.040	-4.438	27.861	-13.005	-11.400
	<i>0.07</i>	<i>-1.41</i>	<i>0.25</i>	<i>-1.00</i>	<i>-2.50</i>	<i>-1.20</i>	<i>-0.31</i>	<i>1.50</i>	<i>-0.90</i>	<i>-0.84</i>
Average age of adult hh members	0.379	-0.467	0.376	-3.966	-6.141	-6.354	8.063	-3.504	-10.772	-2.938
	<i>0.11</i>	<i>-0.13</i>	<i>0.11</i>	<i>-1.24</i>	<i>-1.62</i>	<i>-2.02</i>	<i>1.63</i>	<i>-0.84</i>	<i>-2.64</i>	<i>-0.61</i>
Child of hh head	95.840	-42.404	-10.068	89.408	23.018	-51.560	-92.786	-45.695	111.619	-168.735
	<i>0.87</i>	<i>-0.51</i>	<i>-0.14</i>	<i>1.02</i>	<i>0.23</i>	<i>-0.44</i>	<i>-0.62</i>	<i>-0.49</i>	<i>0.98</i>	<i>-1.24</i>
Vocational school	-47.683	-3.256	-108.498	-67.207	-76.243	-45.343	34.987	88.532	15.963	-35.430
	<i>-1.07</i>	<i>-0.08</i>	<i>-3.92</i>	<i>-2.49</i>	<i>-2.40</i>	<i>-1.58</i>	<i>0.74</i>	<i>1.72</i>	<i>0.38</i>	<i>-0.89</i>
Change in hukou	112.556	-65.124	85.118	45.600	-15.019	51.905	25.631	247.411	-72.604	201.230
	<i>1.90</i>	<i>-1.40</i>	<i>1.97</i>	<i>1.40</i>	<i>-0.26</i>	<i>1.23</i>	<i>0.28</i>	<i>1.50</i>	<i>-0.56</i>	<i>1.83</i>
Big city	-40.351	-99.741	11.917	-8.247	-10.235	-65.638	0.000	0.000	91.759	19.450
	<i>-1.16</i>	<i>-2.90</i>	<i>0.37</i>	<i>-0.29</i>	<i>-0.31</i>	<i>-2.17</i>	<i>.</i>	<i>.</i>	<i>1.57</i>	<i>0.37</i>
Constant term	3499.4	2413.3	3188.2	2823.1	2452.1	4654.7	3452.4	2123.9	4842.9	4400.7
	<i>3.71</i>	<i>2.57</i>	<i>3.99</i>	<i>3.71</i>	<i>3.59</i>	<i>4.53</i>	<i>2.32</i>	<i>2.26</i>	<i>3.65</i>	<i>3.39</i>
# obs.	818	994	1417	1883	1155	1421	367	432	431	619
R²	0.05	0.06	0.05	0.05	0.04	0.07	0.07	0.05	0.08	0.04

Note: T-statistics in italics.