

Economic Transition and Labour Market Adjustment in China: An Exploratory Study

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Purpose/Motivation

- Examine employment and wage trends in the reform era from an evolutionary perspective
- The issue:
“Is the easy phase of economic transition fueled by surplus labour coming to an end?”

- A large micro-economic literature on the labour market in China,
but, so far, every few attempts have been made to examine the evolving labour market conditions in the process of economic transition.
 - a major knowledge gap
 - national policies impacting on labour allocation can have perverse effects on the growth process and economic wellbeing, if they are out of line with the prevailing labour market conditions

Contents

1. Analytical framework and data
2. Initial conditions, reforms and labour mobility
3. Labour supply and employment
4. Wage trends
5. Functional distribution of income
6. An econometric analysis of wage differentials
(To be presented by Professor Fukao)
7. Concluding remarks

1. Analytical framework and data

- The Lewis model of ‘economic development with unlimited supplies of labour’
 - our application to China is informed by the contributions by previous studies of ‘modern economic growth’ in Japan and the East Asian NIEs
(eg. Minami (1973, 1986), Fei, Ohkawa and Ranis (1985), Ranis 1993, Fields 1994)

Data source

- Official data on employment and wages from, *China Labour Yearbook* and *Yearbook of Township and Village Enterprises*
- Relevant evidence from the micro studies
- Data from the Chinese Household Income Project, Chinese Academy of Social Science (for wage-function estimation in Section 5)

Data limitations

- Unavailability of time-series data on key variables such as the skill composition of workers, wages of unskilled workers, and wages of migrant works
- Issues of quality and consistency of data coming from a statistical system evolved in the command-economy era (Banister 2005a & b, Rawski and Xiao 2001)

The inferences/conclusions drawn are only suggestive and tentative.

- should be treated only as working hypothesis

2. Initial conditions, reforms and labour mobility

- Chinese economy on the eve of reforms
 - a classic example of a dualistic labour surplus economy; a vast labour reserve (over 450 million) bottled up in low-productive farming and rural industry
- Gradual shifting of institutional barriers to labour mobility and wage reforms in the urban economy since the early 1980s
- SOE reforms since 1994

These notable reforms notwithstanding,

- there are still considerable obstacles to rural-urban labour mobility
- the SOE sector, where employment and remuneration practices are far from being subject to market-discipline, still accounts for over one-fifth of urban employment (65 million in 2005)

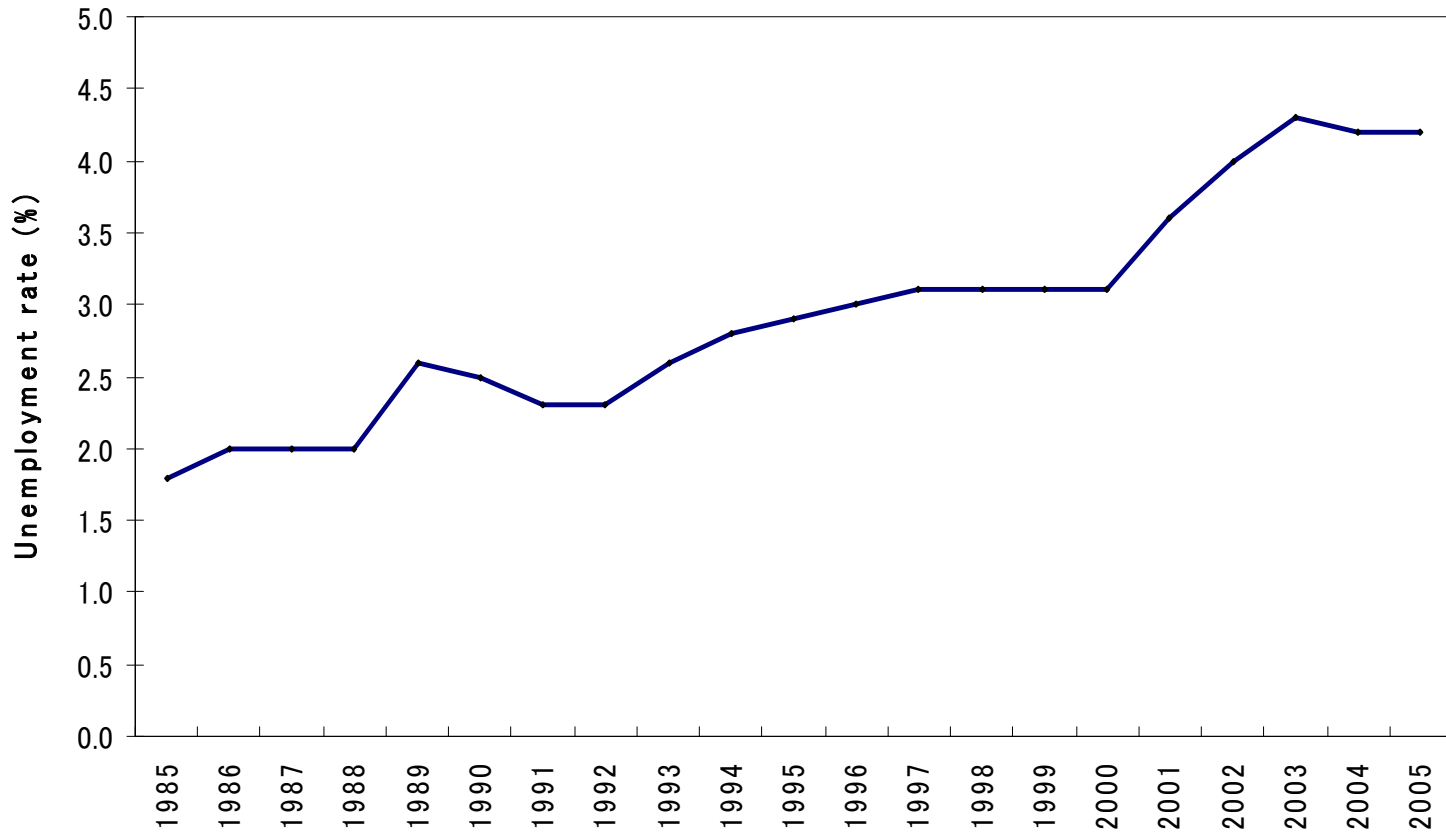
3. Labour Supply and Employment

Table 1: China: Population Statistics, 1985-2005

- Decline in average annual population growth from 1.4% in 1985-95 to 0.9% during 1995-05
- But, working age population has been growing at a much faster rate (1.4% in 1995-2006) – ‘population dividend’
- Projection for 2025:
population 1.5 billion; labour force: 90 million

- Employment expansion has not kept up with growth in labour force, in spite of impressive growth of labour absorption in urban private enterprises and TVEs (Table 2)
- Official (registered) urban unemployment rate from an average level of 2.3% in the 1990s to 4.2% in 2005 (Figure 1).
(Discuss limitations of the official unemployment rate)

Figure 1: Registered Unemployment Rate in Urban Areas



- According to the same indicator, the urban unemployment rate is much higher in recent years in fast-growing coastal provinces (eg. Guangdong, Shanghai, Guangxi) compared to labour-sending interior provinces (Sichuan, Gansu, Qinghai).
- Alternative (unofficial) estimates of urban unemployment varies in the range of 6 to 8% (about 15 million)
- Underemployment in the rural economy:
 - no data are available for systematic quantification of rural labour surplus (for example, as in Minami 1973)
 - Tentative estimates range from 150 to 275 million (OECD 2002)

4. Wage trends

- We observed in the previous section that China is still a surplus labour economy
- Are the trends and patterns of urban wages consistent with these labour market conditions?

First, let us look at the official data on urban real wages

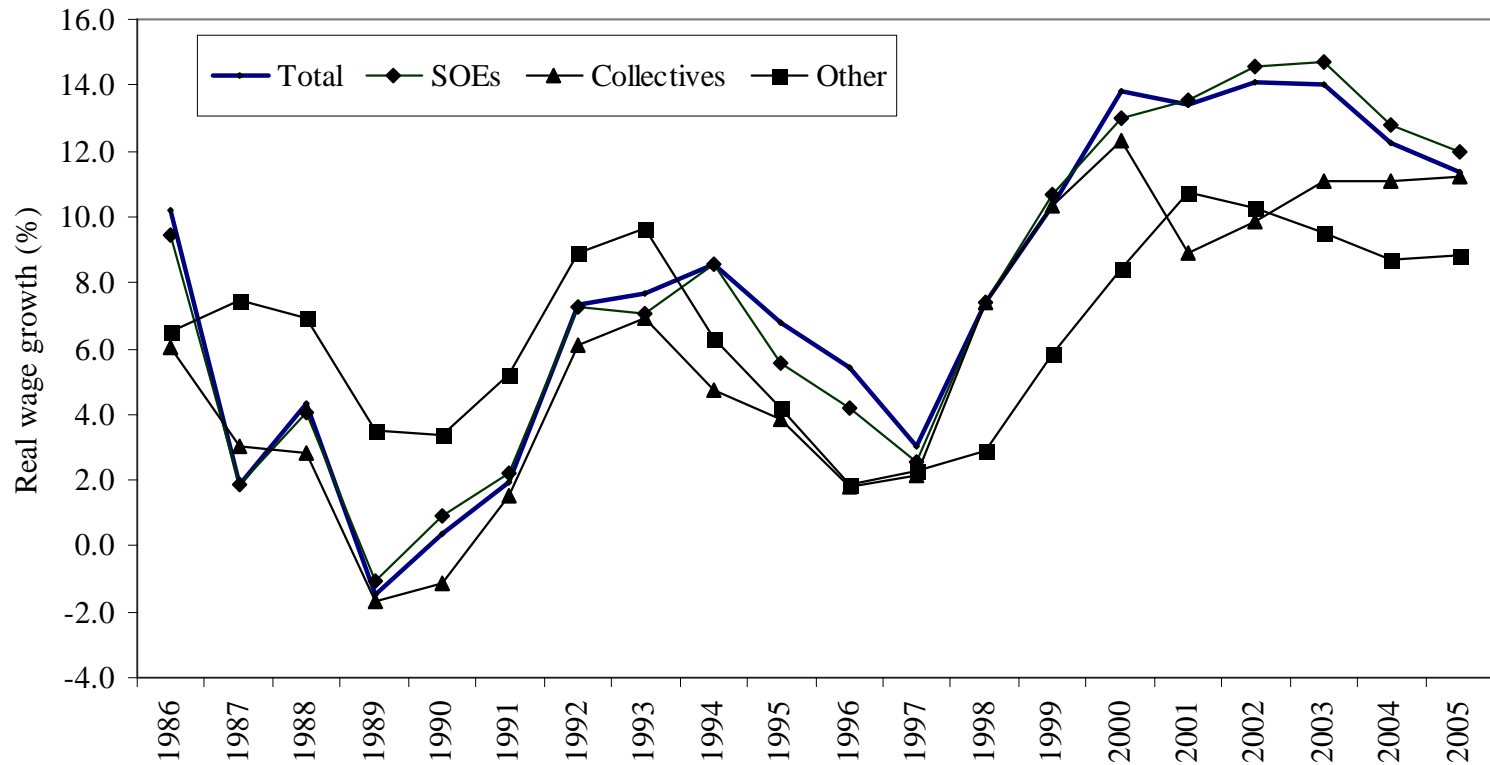
(Discuss limitations)

- The growth of aggregate urban wage rate in recent years reflects predominantly the faster growth of SOE wages (Figure 2)

Wage growth during 1995-05:

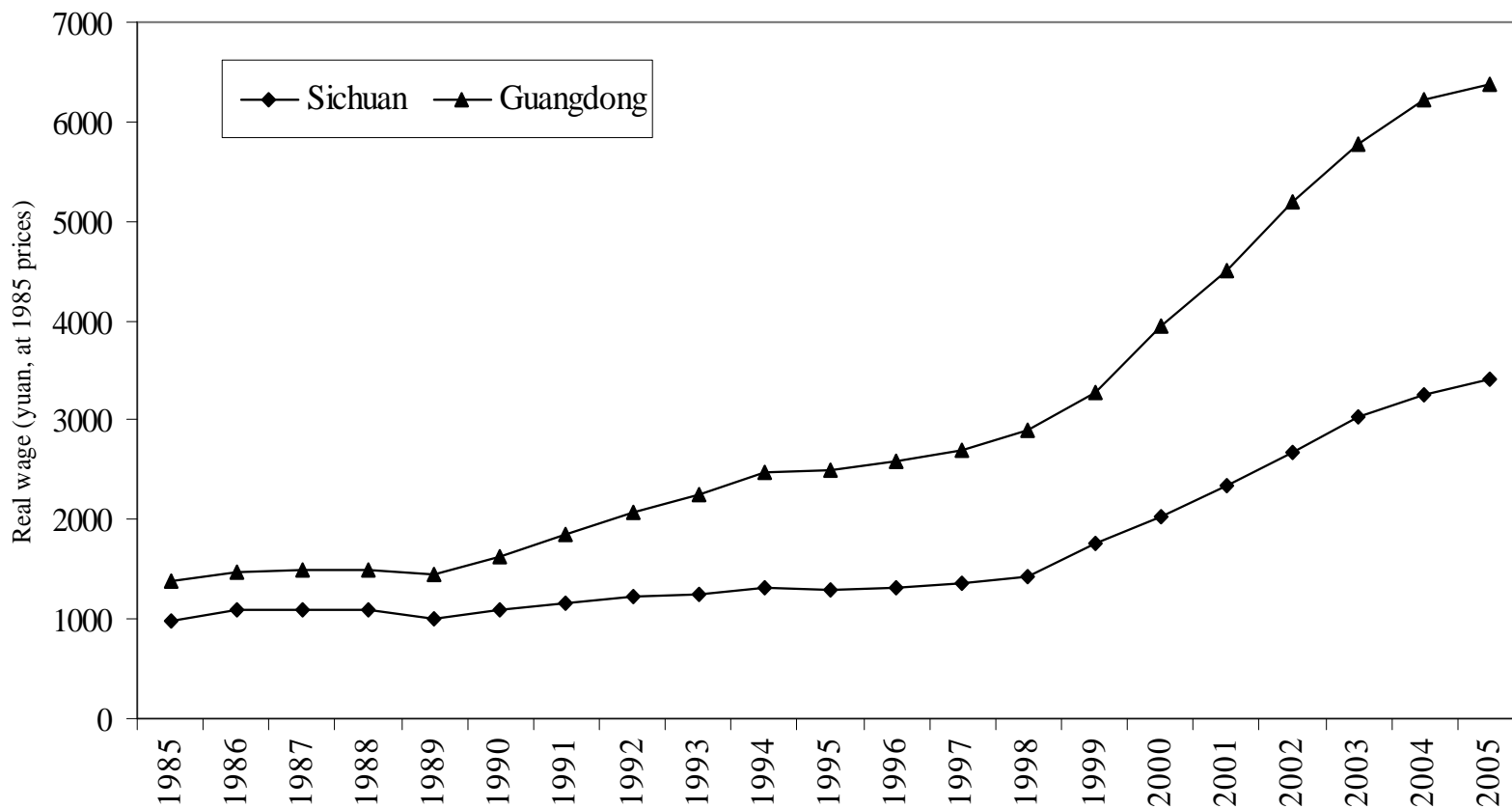
| | |
|---------------------------|-------|
| Aggregate urban wage rate | 11.5% |
| SOE | 10.7 |
| non-SOE | 7.2% |

Figure 2: Growth of Real Urban Wages by Ownership of Firms, 1986-20005 (Three-year moving average)



- Vast differences in real wage growth across provinces (Table 4) –
wage growth is much faster in fast- growing (and labour importing) coastal provinces (Guangdong, Shanghai, Guangxi) compared to labour-sending interior provinces (Sichuan, Gansu, Qinghai) (Table 4)
- A comparison of wages in Sichuan and Guangdong provinces (Figure 3)
 - the gap has widened over the years

Figure 3: Real Wages in Sichuan and Guangdong Provinces, 1985-2005 (yuan, at 1985 prices)



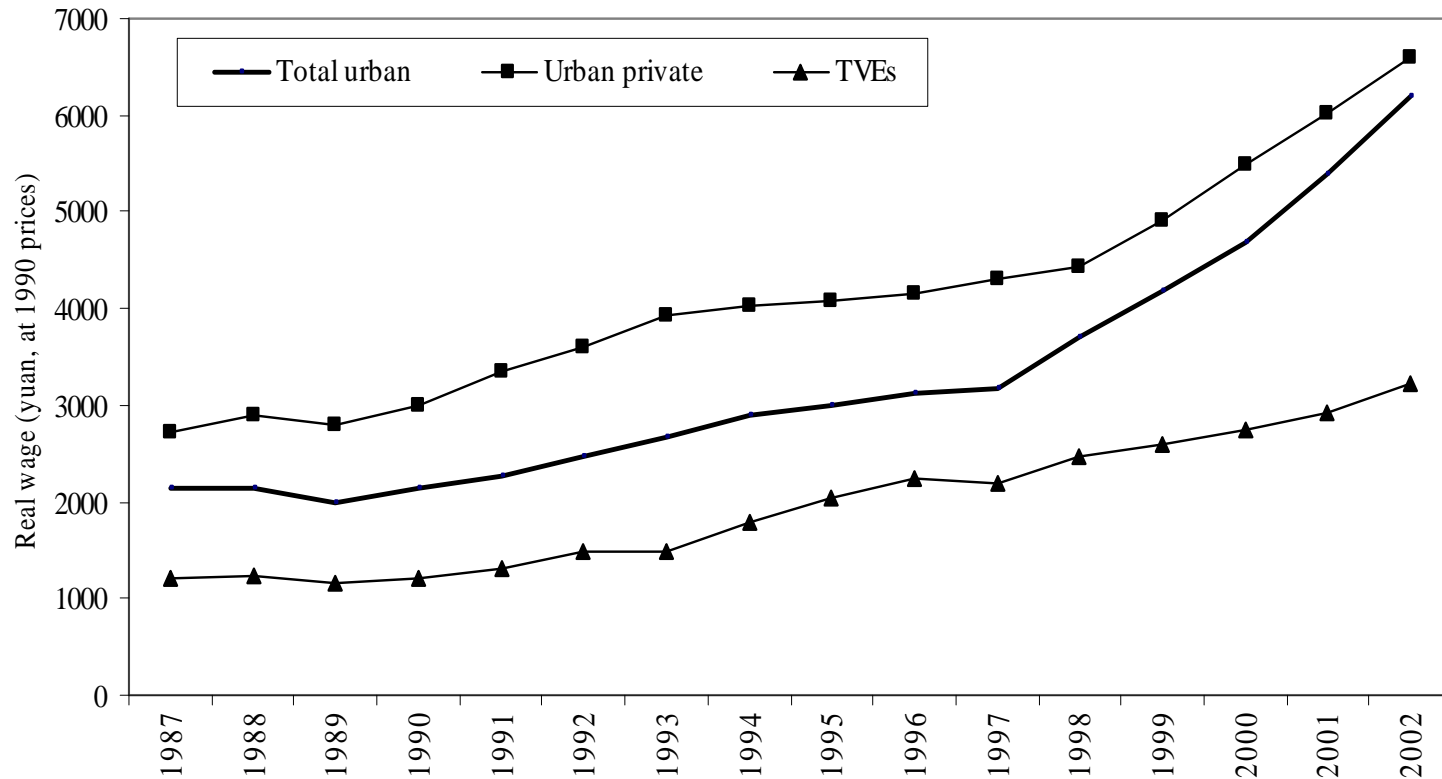
- Comparison of real wages in all urban firms, urban private firms and TVEs (Figure 4)

TVE wages better reflects labour demand conditions urban unskilled workers compared to the wage series of other ownership categories (Banister 2005b, Cooper 2006)

(TVEs predominantly employ unskilled rural workers whose employment decisions are presumably closely tied to wages in the rural economy)

- A vast gap in real wages between TVEs and urban enterprises (particularly urban private enterprises)
The gap has remained virtually unchanged throughout.

Figure 4: Real wages in all urban firms, urban private firms and TVEs, 1987-2002 (Yuan, at 1990 prices)



- Survey-based evidence:
Qin (2003), Zhu (2002), Meng and Zhan (2001),
Meng (2007)
 - real wages of migrant workers engaged in the urban economy are much lower than that of their urban counterparts and have remained virtually flat.

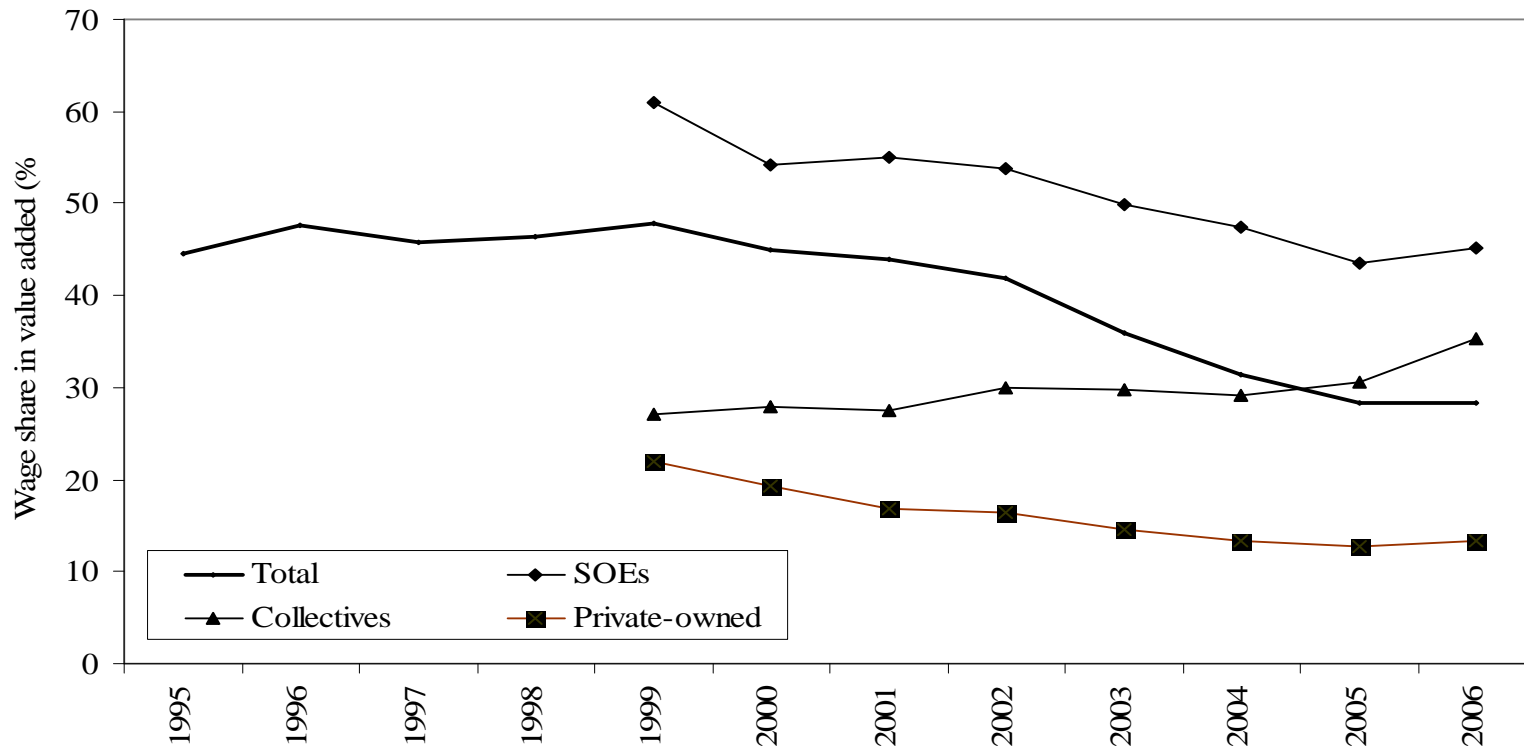
5. Functions Distribution of Industrial Value Added

- How has the surplus-labour conditions reflected in the functional distribution of income in Chinese industry?

See Figure 5

- The patterns are consistent with the Lewisian prediction of persistent high profits in a labour-surplus economy.

Figure 5: Wage Share in Industrial Valued Added by Ownership Category, 1995-2006

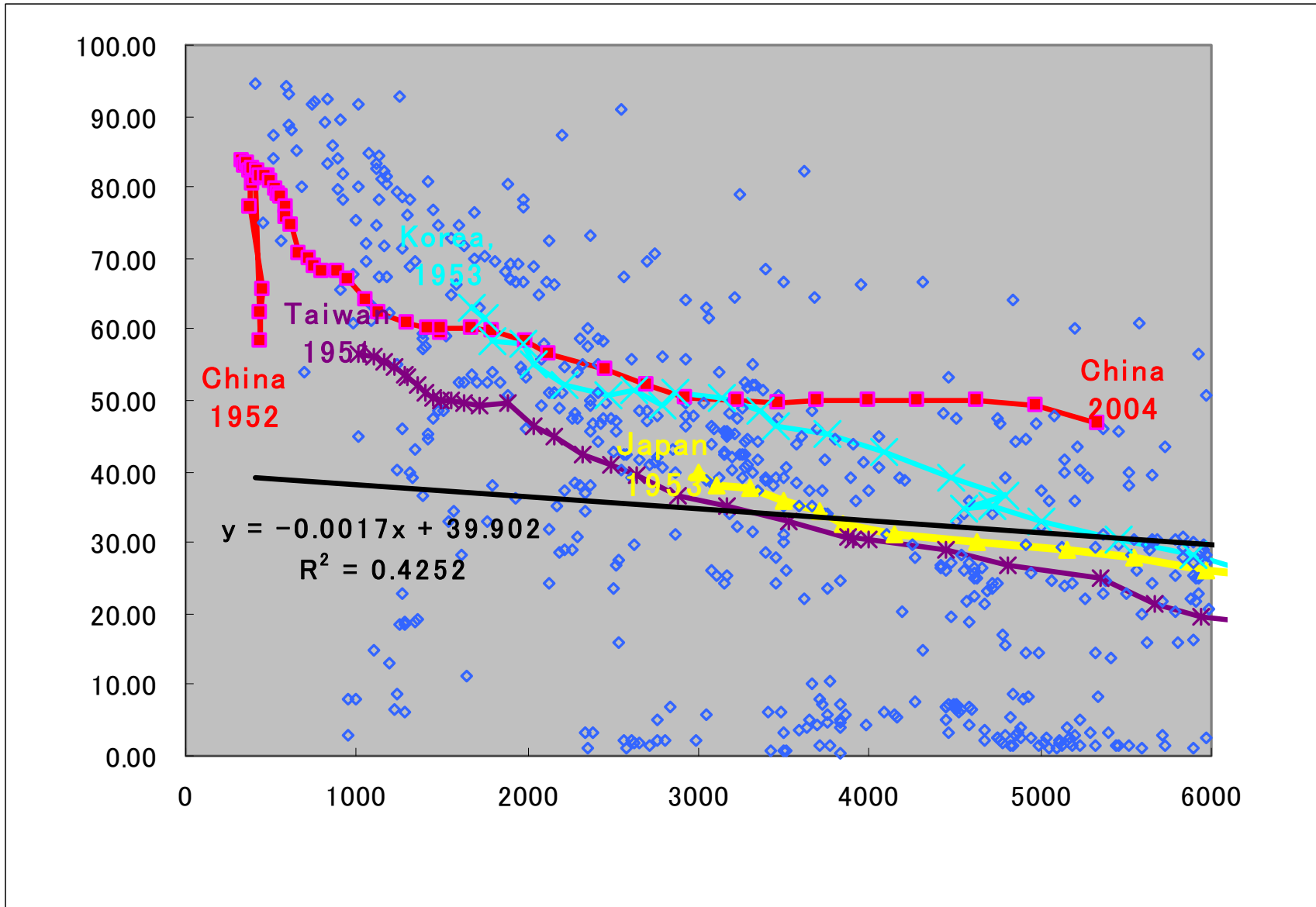


- Labour share in total industrial value added declined from about 50% in the mid-1990s to about 42% by 2005.
- The decline was even sharper in private enterprises, from 22% to 12%.
- These figures are consistent with the available evidence on the functional distribution of income in Hong Kong during 1950s and 1960s (Chow and Papanek 1981)

6. Wage differentials between regions and between migrant and non-migrant workers

To be presented by Professor Fukao

Percentage of workers in the agricultural sector



6. Wage Differentials between Regions and between Migrant and Non-migrant Workers

Using the results of the wage function estimation conducted by Yuan and Sato (2007),

- we investigate whether the coastal-inland wage gap in China widened from the 1980s to the 2000s**
- we also evaluate the size of the wage gap between migrant and non-migrant workers.**

Data

Yuan and Sato's estimation is based on the following data.

- Surveys on households consisting of city residents in 1988, 1995 and 2002, which were conducted by the Institute of Economics of the Chinese Academy of Social Sciences (CASS) as part of its Chinese Household Income Project (CHIP) (CHIP CASS surveys).**
- A supplementary survey newly introduced in 2002 (the Rural-Urban Migrant Household Survey) on households consisting of non-city residents who temporarily live in cities. 96% of workers have a rural family registration.**
- Wages are defined as the sum of standard monthly wage payments plus additional allowances.**

Explanatory variables

Sex and age

Female dummy

age-15

$(\text{age}-15)^2/100$

Education dummies

College

Senior high school

Junior high school

Primary school

Ownership dummies

State-owned enterprise

Urban collectives

Urban private companies (including partnerships)

Urban one-man enterprises

Foreign companies (including Sino-foreign joint ventures)

Other ownership

Industry dummies

1. Agriculture, forestry, animal husbandry, fishery and water conservation

2. Manufacturing and electricity, gas and water supply

3. Mining and geological survey and prospecting

4. Construction

5. Transportation, communication, postal services and telecommunication

6. Commerce, restaurants & catering, materials supply, marketing, and warehouses

7. Real estate, public utilities, personal and consulting services

8. Medical services, hygiene and social welfare

9. Education, culture, arts and broadcasting

10. Scientific research and technical services

11. Finance and insurance

12. Government, party and social organizations

13. Others

Explanatory variables (contd.)

Province/municipality dummies

Beijing

Shanxi

Liaoning

Jiangsu

Anhui

Henan

Hubei

Guangdong

Chongqing

Sichuan

Yunnan

Gansu

Coastal area dummy

Coastal area (Beijing, Jiangsu and Guangdong)

Inland area (other province/municipality)

Migrant worker dummy

Migrant workers (non-city resident workers who temporarily live in cities)

Non-migrant workers

Major Results (1)

According to the estimation results based on the combined data of non-migrant and migrant workers for 2002,

Cities in Inland region

38% (0.32)

**Cities in Coastal region
(Beijing, Jiangsu, Guangdong)**

Non-migrant workers



Non-migrant workers

17% (0.16)

20% (0.18)

35% (0.30)

Migrant workers



Migrant workers

Major Results (2)

- **According to estimated wage functions for non-migrant workers with a coastal area dummy for 1988, 1995, and 2002, the coastal/inland wage differential widened by 19 percentage points from 1988 to 1995 and narrowed by 7 percentage points from 1995 to 2002.**

Major Results (3): Wage Differentials between Regions in the Case of Migrant-Workers

Results of the Blinder-Oaxaca decomposition (Oaxaca 1973).

- **The basic idea of the Blinder-Oaxaca decomposition is to estimate wage functions separately for the two groups (migrant workers in the coastal region and migrant workers in the inland region) and decompose the gap between the average wage rates of these two groups into three factors,**
- **differences in endowments, such as the education level, age, etc.**
- **the difference of the shift coefficient;**
- **and differences of other coefficients, such as the education premium, the age premium, etc.**

We find that the wage gap due to endowments is small. On the other hand, the wage gap due to the shift coefficient is very large. Finally, the differences of other coefficients substantially reduce the wage gap.

Results of the Blinder-Oaxaca decomposition (Oaxaca 1973)

- In the case of a male 25-year-old high school graduate in a state-owned enterprise in the manufacturing sector (including electricity, gas and water supply), the coastal/inland wage gap is 52% (0.42 in logarithmic terms).
- But in the case of either female workers, older workers, or workers in industry 6 (commerce, restaurants & catering, materials supply, marketing, and warehouses) or industry 7 (real estate, public utilities, personal and consulting services), the coastal/inland wage gap is much smaller (Panel B).
- Because of this canceling-out effect, the average wage gap of the two groups is 35% (0.30 in logarithmic terms).
- Probably, the excess labor problem in the inland agricultural sector is serious for aged and unskilled workers who are not well suited for work in the manufacturing sector in the coastal region. The decomposition results suggest that there exists a mismatch problem in the labor market.

Regional Differences in the Consumer Price Level

Probably we can attribute the regional wage gap to several factors, such as regional differences in the consumer price level, the economic and social cost of migrations (moving costs, the risk of being unemployed in the coastal region, etc.), and institutional obstacles to migration.

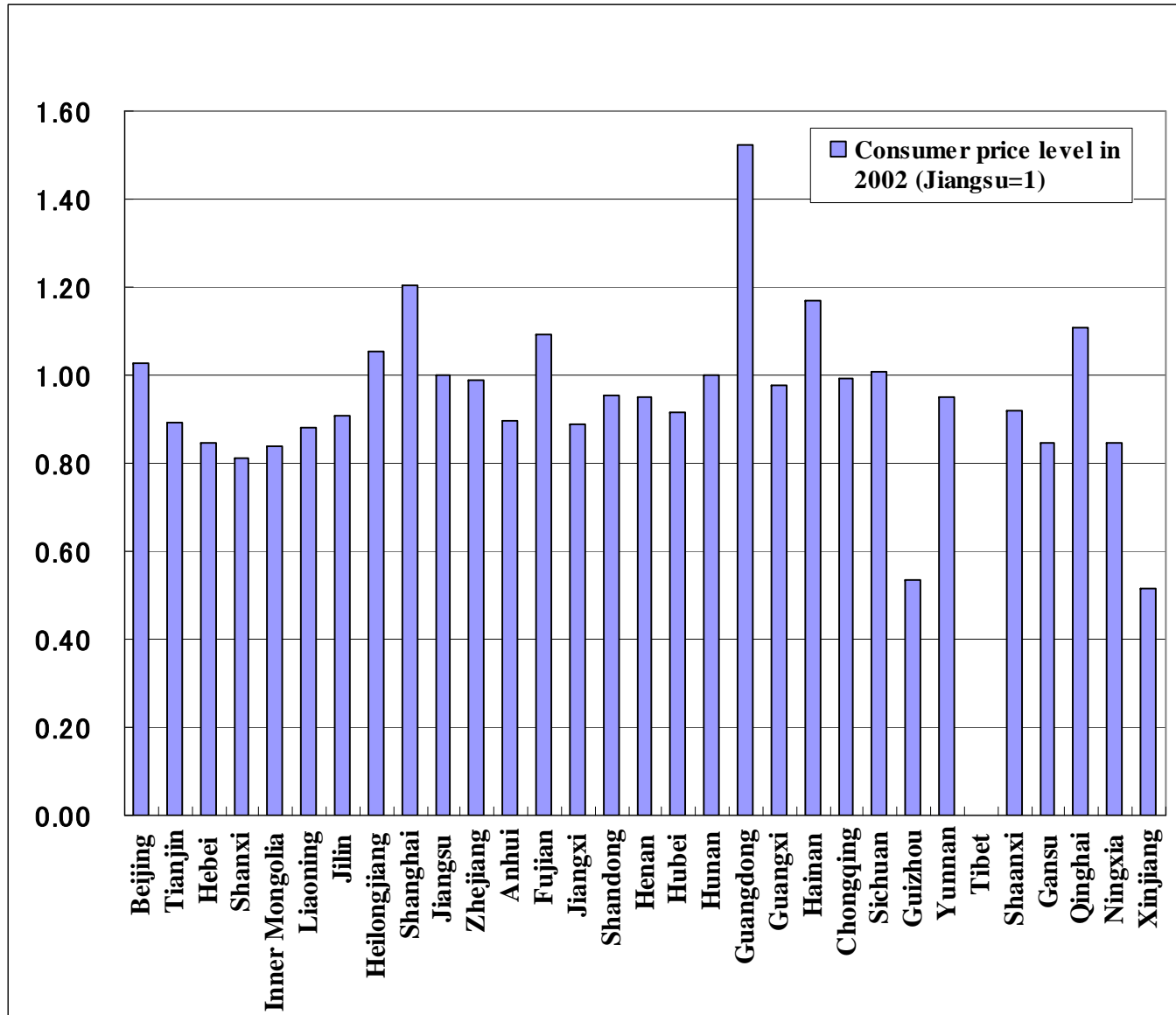
We estimate price differences between provinces and municipalities in China for 2002. We use consumption price level data of 35 commodities and services (20 food items, 1 clothing item, 3 consumer durables, and other 11 items, such as house rent, electricity, gas, water supply, transportation, telecommunication, and medical services).

We obtain the price level data and the consumption weight data for each province/municipality from

the Price Yearbook of China, 2003 published by the National Development and Reform Commission

the China Statistical Yearbook, 2003 published by the National Bureau of Statistics of China.

**Figure 11: Consumer Price Levels by Province/Municipality in 2002
(Jiangsu=1)**



Regional Differences in the Consumer Price Level (contd.)

- In 2002, the consumer price level in Guangdong was 67% higher than in Gansu and 99% higher than in Guizhou.**
- When we use the size of the sample of workers in each province in the dataset for the estimation of wage functions as weights for the aggregation and calculate the ratio of the (geometric weighted) average consumer price level of the coastal region to that of the inland region, we find that the average consumer price level in 2002 was 24.3% higher in the coastal than in the inland region.**
- It is important to note that the large gaps in regional price levels themselves are endogenously determined and may be partly caused by institutional obstacles to migration.**

7. Concluding Remarks

- China's economic expansion fueled by surplus labour has not yet run out of steam.
- Further labour market reforms to facilitate gainful absorption of labour is vital for sustaining rapid growth with equity.
 - proposed universal unemployment insurance schemes and the proposed Labour Contract Law seem premature.
 - **in a labour-surplus economy, the best social protection that the government can provide the poor with is creating opportunities for gainful employment**

- Further labour market reforms aimed at removing institutional constraints on labour mobility
- Given the environmental considerations and infrastructure problems associated with rural-urban migration, there is a strong case for a renewed emphasis on rural development, in particularly initiatives to spread industrialization dynamism to the country side (the Taiwanese experience may be relevant here; Ranis (1994))
- Greater emphasis on primary education and vocational training (as in Taiwan in the 1960s)