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**Recent Trends of Migration and Population in Shandong**

**Zusammenfassung:** Dieser Aufsatz basiert auf regulären Daten der Provinzstatistik von Shandong sowie auf 1995 durchgeführten Erhebungen und Interviews in Ji'nan und Qingdao. Nach einem kurzen Überblick zu Provinz-Migrationsraten untersucht er die Motivations- und Berufsstruktur, die Zusammensetzung nach Alter und Geschlecht, die Beschäftigungsverteilung, den Bildungsstand und die Einkommenshöhe von Migranten. Ein ländlicher Arbeitskräfteüberschuss und eine durch das rigide Meldewesen aufgestaute Urbanisation werden auch in Shandong als die Hauptabstoßungsfaktoren der Land-Stadt-Migration festgestellt. Ihnen entsprechen als Hauptanziehungskräfte ein zunehmendes Einkommensgefälle zwischen Stadt und Land mit spürbaren Einkommensgewinnen sowie niedrigen Opportunitätskosten für die Migranten. Während die Städte von der Migration durch die Arbeitskräfteabsorption in einem dadurch hoch wettbewerbsfähigen nicht-staatlichen Sektor profitieren, stellen Geldüberweisungen an Migranten-Familien in den Heimatorten einen wichtigen Vorteil für das Land dar.

**Schlagworte:** Land-Stadt-Migration, Alter, Geschlecht, Beruf, Bildung, Einkommen, Geldüberweisungen, Abstoßungs- und Anziehungsfaktoren

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**Abstract:** This article is based on both regular provincial statistics from Shandong, surveys and interviews conducted in Ji'nan and Qingdao in 1995. After giving a brief overview of provincial migration rates, it investigates motivational and occupational structure, composition by age and sex, employment distribution, educational attainment and income level of migrants. A rural labour surplus and pent-up urbanisation due to the rigid household registration system are diagnosed as the main push factors of rural-urban migration in Shandong. They are complemented by strong pull factors such as an increasing rural-urban income gap with high income gains and low opportunity costs for migrants. While cities profit from migration by absorbing migrant labour in a highly competitive non-state sector, the countryside benefits from remittances to families in migrant home places.

**Key words:** Rural-urban migration, age, sex, occupation, education, income, remittances, push and pull factors

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## 1 Introduction

Since the end of the 1970s, China's economic reform has created new opportunities and motivations for migration and population mobility. First, the implementation of the rural household responsibility system increased the productivity of rural labour, releasing numerous surplus labourers from agricultural production. Secondly, the emergence and expansion of some newly developed non-agricultural sectors in both urban and rural areas have created new job opportunities for rural surplus labour. Thirdly, the reforms aiming at the creation of a labour market have been gradually shaking off structural barriers against migration and population mobility. This process has been reflected by the rapidly expanding scope of migration and population mobility since the beginning of the reform and particularly since the mid 80s.

In recent years, a lot of studies have been undertaken on migration and population mobility accompanied by surveys on an ever-growing scale covering more and more aspects.<sup>1</sup> A certain common understanding has been reached in respect to their nature and quantitative dimension. As to the migration causes, it is commonly believed that the impact of the traditional economic development strategy prevailed in former times. For many years before the reform, China adopted a policy which gave priority to the development of heavy industry and a simultaneous policy of rural-urban segregation. This led to a distorted industrial structure, causing structural barriers against population migration. Labour mobility was thus invisible. Secondly, regional disparities of economic development and imbalances of urban and rural income levels motivated population migration and mobility.<sup>2</sup> A total number of 34.128 million migrations in the traditional sense took place between 1985-1990, among which 32.42% were inter-provincial migrations.<sup>3</sup> It is estimated that the total population flow which mostly comprised rural labour mobility was between 80 million to 120 million<sup>4</sup>, showing a pattern of population movements from the mid-west to eastern coastal areas as well as from rural to urban areas.<sup>5</sup>

Viewing the nation as a whole, we see two trends constituting the migration movement. First, extra-large cities and coastal developed areas exert attraction, migration to these areas being guided by general economic growth. Secondly, attraction is also exerted by the spacious and scarcely populated provinces on the periphery of China. Migration to these places is motivated by natural resources. The provincial net

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<sup>1</sup> The 1986 survey by the Institute of Population Studies, Chinese Academy of Social Sciences (CASS), in 74 counties and townships in China and the 4th Census of 1990 were mainly focused on registered migration in the traditional sense. Surveys focusing on spontaneous population flows with special attention to labour mobility include: Survey on 650 households in coastal areas conducted in 1990 by the Chinese Ministry of Agriculture and the East-West Population Research Centre in the U.S.; survey on 12,673 farm households conducted by the Institute of Rural Development, CASS, and the China Agricultural Bank in 1993; as well as a survey on 28 counties in China conducted by the Economic Committee of the Chinese People's Political Consultative Conference, the State Council Development Research Centre and the China Rural Labour Development Research Association in 1994.

<sup>2</sup> Cai Fang, 'Renkou qianyi he liudong de chengyin qushi he zhengce' ('The Causes, Trends of Population Migration and Mobility and Their Policy Implication'), in: *Zhongguo renkou kexue* (China Population Science), No.6, Beijing 1995.

<sup>3</sup> State Council Census Office, Population Statistics Department, State Statistics Bureau, ed., *Zhongguo 1990 nian renkou pucha ziliao* (China 1990 National Census), Beijing 1993.

<sup>4</sup> The Central Committee of the Communist Youth League estimated 80 million. He Qing also made the same estimation. Pan Shengzhou's estimation is a total of 60-70 million in 1992 with a 10% annual increase, the present figure being 80 million. Shi Shushi's and Xiao Jing's estimation is 90 million and 80-100 million respectively according to different sources of information. The estimate of the Rural Development Institute of CASS and of the China Agricultural Bank for 1993 however is lower. It amounts to 50 million. It is worth mentioning that different people have different ways of calculation based on different research target groups. Confer: 'Zhongguo nongcun qingnian shengyu laodongli youxu liudong wenti gaoceng yantaohui jiyao' ('Minutes of a High Level Symposium on Orderly Mobility of Rural Surplus Labour in China'), in: *Zhongguo qingnian bao* (China Youth Paper), April 2, 1995; He Qing and Li Huang, 'Yi xi yi you mingong chao' ('Both Happy and Worried for 'Tide of Labour Mobility)'), in: *Sichuan gongren bao* (Sichuan Workers Daily), March 1, 1994; Pan Shengzhou, 'Nongcun laodongli liudong wenti yanjiu' ('Research on Rural Labour Mobility'), in: *Guanli shijie* (World of Management), No.3, 1994; Shi Shushi, 'Nongcun xunzhao chulu chengmen xiang nongmin kai duo da' ('Finding a Way Out: How Open Is the City Gate?'), in: *Gongren ribao* (Worker's Daily), January 7, 1995; Xiao Jing, 'Xiangxiaren jin cheng qiu fazhan cheng li ren xu bao pingchang xin' ('Rural People Pursuing Development in Cities, Urban People Should Adopt a Calm Attitude'), in: *Zhongguo qingnian bao* (China Youth Paper), May 18, 1995; Li Pan, 'Wai chu da gong renyuan de guimo liudong fanwei ji qita' ('Scale and Scope of Labour Mobility and Other Thoughts'), in: *Zhongguo nongcun jingji* (China Rural Economics), No. 9, 1994; Chan, 'Migration Controls and Urban Society in Post-Mao China', Working Paper No. 95-2, Seattle Population Research Centre, University of Washington, Battelle.

<sup>5</sup> Cai Fang, 'Renkou qianyi he liudong de chengyin qushi he zhengce' ('The Causes, Trends of Population Migration and Mobility and Their Policy Implication'), in: *Zhongguo renkou kexue* (China Population Science), No. 6, 1995; Li Pan, 'Wai chu da gong renyuan de guimo liudong fanwei ji qita' ('Scale and Scope of Labour Mobility and Other Thoughts'), in: *Zhongguo nongcun jingji* (China Rural Economics), No. 9, 1994.

out-migration rate<sup>6</sup> according to the 4th National Census indicates that the three municipalities under central administration have the biggest negative values of out-migration. It also indicates that 11 provinces have negative out-migration rates. Shandong is one of them. However, as for the migration rate<sup>7</sup> calculated from the same data, Shandong comes at the bottom of this category. (table 1).

Table 1: Migration Rate and Net Out-migration Rate by Province, 1990 (%)

Province	Migration Rate	Net Out-Migr. Rate	Province	Migration Rate	Net Out-Migr. Rate
Beijing	9.08	-55.92	Henan	4.15	3.14
Tianjin	4.42	-44.57	Hubei	5.47	-2.89
Hebei	4.57	4.48	Hunan	5.60	7.54
Shanxi	6.19	-4.98	Guangdong	10.91	-2.14
Inn.Mongolia	7.99	2.84	Guangxi	5.94	17.78
Liaoning	6.60	-9.49	Sichuan	8.27	-8.20
Jilin	7.36	6.50	Guizhou	6.04	13.02
Heilongjiang	8.76	7.77	Yunnan	4.42	8.51
Shanghai	8.62	-46.81	Tibet	5.40	1.16
Jiangsu	5.56	-4.54	Shaanxi	6.35	2.27
Zhejiang	6.20	11.47	Gansu	6.17	5.90
Anhui	4.65	7.47	Qinghai	11.66	-2.64
Fujian	6.44	-0.73	Ningxia	8.47	-8.98
Jiangxi	5.27	3.44	Xinjiang	8.85	-4.80
Shandong	4.18	-2.14	National	6.04	-

Source: *Zhongguo 1990 nian renkou pucha ziliao* (Data on 1990 Census in China), compiled by the State Council Census Office, Population Statistics Department, State Statistics Bureau, Vol.4, Beijing 1993, pp.152-330.

China's rapidly growing migration and population mobility is closely inter-related with the economic reforms and development strategy. Because Shandong is among the core provinces of this process, it is of significance to study its pattern of migration and population mobility. The following characteristics of Shandong seem noteworthy: First, it is a large province in terms of population. By the end of 1994, its population reached 86.71 million, number 3 in the country after Sichuan and Henan. Shandong has a low population growth rate of 3.02%, the lowest in the nation except for Shanghai.

Secondly, Shandong is a province leading in economic growth. In 1994 its GDP was 277.949 billion Yuan, the third place in the nation. The GNP per capita was 3222 Yuan, the 10th in the country. Per capita gross output of township and village enterprises was 7846.73 Yuan, 1.21 time higher than the national average of 3553.48 Yuan. Undoubtedly, it is of significance for theoretical and policy research to study its population mobility and to shed light on its similarities and differences in comparison with other regions.

The following analysis is mainly made based on yearbooks published by the Statistical Bureau, the data collected by the 4th National Census,<sup>8</sup> statistics on migrants with change of permanent registration and numbers on provisional registration released by the Public Security Bureau, as well as data from field surveys in Ji'nan, capital of Shandong Province, and Qingdao, its largest city.<sup>9</sup>

<sup>6</sup> Percentage of net out-migrants. Net out-migration is the balance of out-migrants minus in-migrants divided by the total numbers of migrants including out- and in-migrants.

<sup>7</sup> The migration rate is the ratio of total out- and in-migrants versus total population.

<sup>8</sup> The data provided are on the number of migrants between 1985-1990 staying over one year.

<sup>9</sup> In July 1995, the author and his colleagues conducted a survey of 1504 rural workers who moved to live in Ji'nan without permanent residence. The survey was conducted as follows: Four districts where rural workers lived in compact communities were selected. In each district, 3 police substations were chosen according to the quantity and distribution of rural migrant workers as recorded by the substations; sample size and distribution of sample occupations were determined. Lastly, based on sample size and the distribution of occupations, all the sampled migrant workers in enterprises, government agencies and families

## 2 Main Features of Migrants

### 2.1 Geographic Features

According to the different sources of information in table 2, population migration in Shandong is mainly intra-provincial with this type of migration covering more than half of the total. When only taking labour mobility into account, the scope of migration is smaller, and the proportion of rural-urban migration tends to be much bigger. In addition to the findings from the Ji'nan survey, when we analyse data on provisional residents in Qingdao and exclude those residents not involved in economic activities, 80.2% of them came from within the province and 62.1% from the rural areas. A survey on 30,400 temporary migrant workers in Qingdao enterprises revealed these characteristics even more clearly. On the one hand, all of them came from rural areas. On the other hand, the scope of their mobility tended to be smaller with 38.4% from suburban areas of the city, 57.8% from areas within the province and only 3.8% from outside the province.

Table 2: **Geographic Features of Shandong Migrants, 1985-1995**

	Total (Mio.)	Intra- provincial (%)	Inter- provincial (%)	From Urban Areas (%)	From Rural Areas (%)
<b>Census Data*</b>	1.8004	66.1	33.8	52.6	47.4
<b>Public Security Data**</b>	1.2324	84.5	15.5	n.a.	n.a.
	(1.1985)	(84.5)	(15.5)		
<b>Ji'nan Survey***</b>	0.0015	93.3	6.7	0.0	100.0
<b>Qingdao Survey****</b>	0.3602	53.8	45.7	61.2	38.4

\* 1985-1990 number of migrant population in Shandong, staying for more than one year.

\*\* 1994 number of migrant population in Shandong whose permanent residence was officially transferred; the number in parentheses stands for out-migration.

\*\*\* Data collected from questionnaire survey on rural mobility in July 1995.

\*\*\*\* Registration data on provisional residence in Qingdao collected from the Public Security Bureau in 1994.

Sources: Data on 1990 Census in Shandong, compiled by Shandong Census Office, Beijing 1992; Population Data in All Counties 1994, compiled by Ministry of Public Security of China, Beijing 1995; Field Survey in Qingdao.

### 2.2 Social Status and Employment Structure of Migrants

Among the migrants in Shandong staying more than one year in the 1985-1990 period, 13.5% came due to a job transfer, most of them having changed their place of household registration, 9.8% came due to job assignment or recruitment, 14.6% due to business opportunities, 13.4% because of training or study opportunities, 12.1% in order to live with relatives and friends, 1.9% due to retirement, 12.3% due to the moving of the family, 15.4% due to marriage and 7.0% for other reasons. This motivational structure clearly shows that the nature of planning and the decision making of migrants is constrained by policy. Migration has to get approval from the responsible government agencies. However, if one reviews the types of provisional residence one may find it more flexible. Among provisional residents of Qingdao in 1994, 52.1% of them worked in enterprises, farms, business, tertiary industry or stayed as domestic servants. Only 2.3% moved out on business and 1.6% came to stay with relatives and friends. The rest were more mobile people engaging in non-economic activities. It is obvious that this portion of the mobile population is more geared to spontaneous processes based on self-determination.

The majority of rural migrant workers concentrates in construction industry. Both surveys in Ji'nan and Qingdao suggest that 40-50% of migrant workers work in this field. The rest scattered in enterprises, business and services and some non-professional sectors of government agencies. It is worth mentioning that because in cities there exists visible and invisible unemployment, both the recipient units of rural

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within the identified area were surveyed. In Qingdao, the author and his colleagues visited the Public Security Bureau, the Statistics Bureau, the Labour Bureau and the Family Planning Department, collected data from them and interviewed them on labour mobility.

labourers and the labour bureaus exercise control over the number and occupation of migrant workers. For instance, the Labour Bureau in Qingdao is working on issuing a policy to limit the occupations that can be held by rural workers. This policy will categorise all the job opportunities into types A, B and C. Enterprises with jobs in type A can employ rural workers according to need. Type B can hire them in controlled numbers. Type C cannot take any migrant workers.<sup>10</sup> Once such policy is put into force, it will greatly restrict the already limited jobs for migrant workers.

Table 3: Rural-Urban Migrants in Ji'nan 1995, Monthly Average Income by Occupation

Occupations	Proportion of Sample (%)	Average Monthly Income (Yuan)	Adjusted Monthly Income (Yuan)*
Construction	41.85	450.27	517.20
Enterprises	17.39	355.45	417.74
Institutions	14.08	325.81	386.70
Services	10.71	296.15	417.13
Domestic Servants	3.64	108.43	258.52
Restaurant Owners	3.03	1361.78	1365.11
Small Retailers	3.10	885.43	885.43
Self-employed Repair	3.17	834.13	843.49
Tailors	2.22	994.55	1000.61
Other	0.81	1051.81	1070.56

\* Current monthly wage plus bonus and other benefits obtained. The adjustment factors for other benefits are as follows: provision or housing allowance - 50 Yuan, provision or meal allowance - 100 Yuan, medical allowance - 10 Yuan, travel allowance of home visit - 5 Yuan, and other benefits in kind - 10 Yuan.

Source: Ji'nan Survey

From the Ji'nan survey, we find that average income levels vary remarkably among different sectors and forms of employment (table 3). First, average income levels of self-employed migrants are much higher than those of migrants in other forms of employment. For instance, even the adjusted income earned by private restaurant owners is at least five times higher than that of domestic servants. It can also be shown that their jobs usually require less investment in human resources. This is because of the restrictions that urban labour departments exercise over the occupations of migrant workers. Therefore the income level of migrant workers is mainly determined by the intensity of labour.

### 2.3 Demographic Features of Migrants

All data indicate that the migrant population possesses a comparatively higher dynamism and productivity. First of all, the proportion of males in the total migrant population is high. It accounts for 52.7% among long-term migrants, with the provincial average being 50.9%. In Qingdao it accounts for 78.1% of registered provisional residents and 68.0% of the 'temporary' migrant population. In the temporary migrant population of Ji'nan the percentage of males was 71.3%. Secondly, the age of the migrants tends to be young. A comparison of the age range of migrant labourers and normal rural labourers in Shandong supports this conclusion (table 4).

<sup>10</sup> As for the scope of type C, Qingdao is going to follow Shanghai's restrictions which include the following 23 professions and occupations: Finance and insurance, all types of management and professional positions, dispatchers, department store conductors, star hotel attendants, telephone operators, price monitors, weight monitors, taxi drivers, bus conductors, kindergarten nurses, elevator workers, equipment maintenance workers, tracers, transcription makers, meter copiers, warehousemen, gate guards, analysers, quality controllers, quantity controllers, equipment testing workers.

Table 4: Age Range of Migrant Labourers and Rural Labourers in Shandong 1995 (%)

Age	Migrant Labourers	Rural Labourers
Below 20	21.6	14.8
20 - 24	35.9	15.6
25 - 29	16.5	13.9
30 - 34	12.0	11.7
35 -39	7.3	12.3
40 - 44	3.7	8.9
45 - 49	2.0	6.4
Above 50	1.0	16.5

Sources: Ji'nan survey 1995; Data Base of Shandong Rural Social and Economic Sample Survey

From the employment structure by age and sex of 1504 migrant workers in the Ji'nan survey we find: (1) females are younger than males and usually concentrate in the service industry; (2) except for foremen in the construction industry, the majority of construction workers is below 35 years of age (table5).

Table 5: Rural-Urban Migrants Ji'nan 1995, Employment Distribution by Sex and Age

Occupation	Percentage in the Sample	Male	Female	Below Age 25	Age 26-35	Age 36-44	Above Age 45
Construction	40.69	93.76	6.24	50.57	33.33	14.12	1.97
Enterprises	17.62	67.55	32.45	71.32	21.51	5.56	1.51
Institutions	14.03	63.03	36.97	71.09	23.22	3.32	2.37
Service Industry	10.90	29.45	70.55	94.48	4.29	1.23	0.00
Domestic Servants	3.72	0.00	100.00	100.00	0.00	0.00	0.00
Restaurant Owners	3.13	75.56	24.44	28.89	48.89	15.56	6.67
Repair Business	0.38	68.09	31.91	51.06	29.79	17.02	2.13
Small Retailers	2.19	74.47	25.53	38.30	40.43	19.15	2.13
Tailors	3.00	45.45	54.55	39.39	45.45	12.12	3.03
Construction Foremen	0.38	100.00	0.00	6.67	33.33	40.00	20.00
Others	3.13	83.33	16.67	41.67	50.00	8.33	0.00
Total	100.00	71.32	28.68	61.94	26.41	9.65	2.00

\* The difference between the sample proportions in this table and in table 3 is due to the slight difference of categorisation.

Source: Ji'nan survey

Table 6: Educational Level of Shandong Migrant Population, 1985-1990 (%)



	Illiterate	Elementar y School	Junior High	Senior High School &
<b>Total Population, 6 Years and Older*</b>	20.9	41.2	28.6	9.2
<b>Migrant Population**</b>	8.3	23.0	35.7	33.1
<b>Ji'nan Survey</b>	0.8	15.6	71.2	12.4
<b>Rural Household Survey</b>	13.0	33.7	40.1	13.2

\* Data collected from the Census in 1990.

\*\* Data of migrant population between 1985-1990 staying more than one year.

Sources: *Zhongguo 1990 nian renkou pucha ziliao* (China 1990 National Census), compiled by State Council Census Office, Census Department, China Statistics Bureau, Vol. 1, 4, Beijing 1993; *Shandong nongcun tongji nianjian 1993* (Shandong Agricultural Statistical Yearbook 1993), compiled by Shandong Provincial Sampling Survey Team, Ji'nan 1993.

Finally, the educational level for migrant labourers tends to be higher. There is, however, some difference between the group of officially recognised long-term migrants and the group of temporary rural labourers. The former are better educated with a tendency to continue their education. This is related to formal migration. The illiteracy rate for rural migrant workers is very low, so is their rate of elementary and senior high school education. The predominant educational level for them is junior high school (table 6).

Table 7 indicates that the income level of rural labourers rises parallel with their educational level. The correlation between education and income can be better demonstrated in the group of migrants with senior high school education. It becomes less obvious among the illiterate migrants and those with elementary and junior high school education. This may be caused by the discriminatory urban employment policy and by the age of migrants (table 7).

Table 7: **Monthly Average Income Per Capita by Educational Level of Rural-Urban Migrants in Ji'nan 1995**

	Number of People	Monthly Income (Yuan)	Adjusted Monthly Income (Yuan)
<b>Illiterate</b>	14	410.48	470.12
<b>Elementary School</b>	240	479.64	541.46
<b>Junior High School</b>	1065	433.21	500.62
<b>Senior High School and above</b>	182	575.41	643.46
<b>Total</b>	1501	457.66	524.19

Source: Ji'nan survey

### 3 Factors Affecting Mobility

Just as the whole nation, Shandong has inherited a traditional economic development strategy. For too long a period of time the development of heavy industry got priority, which led to a distorted industrial structure and population distribution. Specifically, this can be seen in the fact that the adjustment of industrial structure has lagged behind the change of output value structure. The population in agricultural employment did not decrease in conformity with the decrease of the agricultural share in the national economy. This has caused a low marginal productivity of the agricultural labour force. Whereas in 1993 the agricultural work force of Shandong counted for 58.4% of the total work force, they only generated 21.5% of the provincial GNP. Another fact is that urbanisation came much later than industrialisation. Although industrial development went ahead, the rural and urban population distribution still retained a very backward pattern. According to the narrow definition of urban population in the 1990 National

Census,<sup>11</sup> urban and town population in Shandong only made up 27.3% of the total population. This suggests that the household registration system has precluded millions from changing their jobs and status. According to the categorisation of the household registration system, in 1990 only 13.4% of the provincial population was non-agricultural. If we take the two above figures as indicators of urbanisation, this means that between 72.7% and 86.6% of the total population were still considered as rural residents, the majority still engaging in agricultural production. Due to these various factors, a great part of the rural population actually consists of surplus labourers. Findings of the 4th National Census indicate that in 1990 there were 9.95 million surplus labourers in Shandong, with a 22.9% surplus rate.<sup>12</sup> This constitutes the essential reason for rural labourers to look for employment opportunities outside.

In the Ji'nan survey, households with labour migration had a larger family size with an above average labour force. In our sample of rural households in Shandong, the average family size is 4.9 people, 0.6 more than the provincial average (4.3); the average sample household has 3.9 labourers, 1.4 more than the provincial average. Labour counts for 79.6% of the total population in the sample households, 21.5 percentage points more than the provincial average (58.1%). Because of the high percentage of labourers, each labourer in our sample households has relatively little land, 0.15 ha per person and 0.29 ha per male labourer, 0.04 ha and 0.06 ha less than the provincial average respectively. One can imagine the extent of labour mobility due to lack of employment opportunities in the plant-growing sector of rural areas. Another push factor behind labour mobility is the fact that there is a relative lack of employment opportunities in non-agricultural sectors for farmers staying in their community. Only 5.3% of labourers in the rural sample households found job opportunities in the non-agricultural sector. In the province as a whole this percentage amounted to 12.0% only.

Table 8: **Income Gap Between Regions of Different Development Levels and Between Urban and Rural Areas in Shandong (1985 Yuan)**

	Urban Residents Income Per Capita* (Yuan)	Farm Household Income Per Capita** (Yuan)	Gap Between Urban/Rural Income (%); Farm Household Income = 1	Gini Coefficient of GDP by Prefecture
1985	699.85	408.12	1.71	n.a.
1986	738.35	423.44	1.74	n.a.
1987	781.37	459.35	1.70	n.a.
1988	771.96	440.89	1.75	n.a.
1989	767.81	399.34	1.92	n.a.
1990	851.19	411.98	2.07	0.248
1991	900.53	452.36	1.99	0.249
1992	972.60	454.13	2.14	0.283
1993	1066.47	474.00	2.25	n.a.
1994	1167.21	532.15	2.19	0.310

\* Urban resident average annual income per capita deflated by national price indices for urban areas.

\*\* Rural household annual net income per capita deflated by national price indices for rural areas.

Sources: *Zhongguo tongji nianjian 1995* (China Statistical Yearbook 1995), State Statistics Bureau, Beijing 1995; *Shandong tongji nianjian 1995* (Shandong Statistical Yearbook 1995), Shandong Statistics Bureau, Beijing 1995.

<sup>11</sup> This method identifies city population as population of all city districts under municipal administration (if the city has districts) or population of all street committees (if the city is without districts). Town population refers to the population of all neighbourhoods administrated by the city. County population refers to all the population that does not fit into either of the above categories. (See reference to Editor's Notes: State Council Census Office, Population Statistics Department, State Statistics Bureau, ed., *Zhongguo 1990 nian renkou pucha ziliao* (China 1990 National Census), Beijing 1993.

<sup>12</sup> The rural population divided by the rural labour support ratio is the total number of rural labour. Deducting the number of labourers in TVE, forestry, animal husbandry and fishery we get the total number of labourers in the plant growing sector. Surveys yield the actual annual labour demand for plant growing plus the additional labour needed during the busy season. This is the total labour demand for the plant growing sector. The difference between the total demand and actual supply of labour is the total number of surplus rural labourers. Its ratio to the total rural labour force is the surplus labour rate.

Similar to the whole country, Shandong, too, faces a regional disparity of economic development levels and an ever-widening income gap between urban and rural areas. Table 8 presents changes in this income gap between urban and rural residents, as well as the Gini Coefficient of GDP distribution among 16 prefectures and cities in the province. It also shows the tendency of the income gap and development levels to get wider and wider. Other conditions remaining the same, the wider the income gap between the places of origin and destination, the bigger the expected gain of labour mobility will be. This is a pull force for the labourers to look for new employment opportunities in new places.<sup>13</sup>

In the Ji'nan sample survey, migrants experienced a noticeable increase in income after labour mobility. The findings of the questionnaire revealed that 81.8% listed more income as the number one objective of their migration.<sup>14</sup> Those who listed a pursuit of urban life styles or personal development as their first migration objective placed income increases in second place. Labour mobility increased the income of the rural workers remarkably. Those who were surveyed made 1875 Yuan per year before and 3500 Yuan after migration, an increase of 86.7%. If we deduct mobility costs from expected gains and take the resulting net income as the pull force of mobility, the low mobility cost is an important factor to reinforce pull forces. Mobility costs include opportunity costs, psychological costs and material costs. Because households with labour mobility tend to have more labourers and very limited employment opportunities in the non-agricultural sectors, there is no negative effect of mobility causes on the family economy. Also, more than half of the migrants return home in the busy season to do farming, so opportunity costs are very low. Samples show that most of the labour mobility is intra-provincial. The job finding risk therefore is also low. Among the 1504 people sampled in the Ji'nan survey, 1403 came from within the province and 1031 had already found a job before leaving home. Among the 372 who did not have a job, 307 found one within one month. This means that 95.4% of the intra-provincial migrant labourers spent less than a month to search for a job.

Low mobility costs are reflected in the training and transportation fees migrants pay. According to the Ji'nan survey, 88.1% of the intra-provincial migrants did not receive or spend any money for training. Among the 167 labourers who paid for training, 124 paid less than 1000 Yuan as a training fee. The average training fee per person was 334 Yuan. 91.7% of all intra-provincial migrant labourers paid less than 50 Yuan on transportation. 97.7% paid less than 100 Yuan.

## 4 Effects of Mobility

When we take into consideration the features of population migration and mobility in Shandong, we conclude that migrants are much more productive and dynamic. This is also backed by economic rationale. What we should do is to take a closer look at the role of migration in a macro sense and judge whether it is positive or not.

### 4.1 Impact on Places of Destination

According to general rule, the level of urbanisation and the level of employment in non-agricultural sectors rise together with per capita income.<sup>15</sup> As discussed above, China for a long time adopted an economic policy which gave heavy industry top priority. The irrational population distribution caused by this type of distorted industrial structure led to Chinese urbanisation levels lagging behind the development stage<sup>16</sup>. In 1993, China's per capita GNP was much higher than that of some low income economies. Her urbanisation level, however, was more or less the same as that of the latter, and her non-agricultural employment level was even lower. Shandong is no exception. As migration is mainly directed from rural to urban areas, other conditions remaining the same, the increase of urban population itself is a plus to the self-adjustment of cities.

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<sup>13</sup> Todaro, M.P., 'A Model of Labour Migration and Urban Unemployment in Less Developed Counties', in: *American Economic Review*, Vol. 69, March 1969, p. 486-499.

<sup>14</sup> The questionnaire asked interviewees to select two of the questions below as their number one and number two motivation for labour mobility: (1) forced by living circumstances, in rural areas it is impossible to make enough money for subsistence; (2) no job opportunity in rural areas; (3) to escape trouble or obligations in rural areas (marriage, debt or other trouble); (4) to make more money in the city; (5) longing for an urban life style; (6) Since everybody else is making money, I also want to have a try; (8) other (please specify).

<sup>15</sup> Chenery and Syrquin, *Patterns of Development, 1950-1970*, New York 1975, Chapter III.

<sup>16</sup> Cai Fang, 'Renkou qianyi he liudong de chengyin qushi he zhengce' ('The Causes, Trends of Population Migration and Mobility and Their Policy Implication'), in: *Zhongguo renkou kexue* (China Population Science), No. 6, 1995.

Table 9: Per Capita Income and Urbanisation Rates (1993 US-\$, %)

Region	Per Capita GNP	Per Capita GNP*	Percentage of Urban Residents	Percentage of Non-agricultural Employment**
China	490	2330	29	40.2
Low Income Economies (excluding China and India)	300	1622	27	47.4
Lower Middle Income Economies	1590	4126	54	55.5
Middle Income Economies	2480	5002	60	69.0
Upper Middle Income Economies	4370	7026	71	80.5
High Income Economies	23090	20399	78	95.5
World Average	4420	8459	44	77.1

\* Calculated by PPP.

\*\* 1992 or 1991 figures.

Sources: The World Bank, World Development Report 1995, New York 1995; International Labour Office, World Labour Report 1993, Geneva 1993.

With the present transition in the country from a planned to a market-oriented economy, the process of urbanisation also functions as a dual-track system. In the planned economy track, it is constrained by a highly controlled household registration system. The scale of migration with change of permanent registration is far from big enough to correct the irrational urban-rural population distribution. Population mobility outside central planning has therefore become a necessity. Its complementary function is shown in table 10 which compares migration trends reckoned by registered migration for Shandong and Qingdao with trends of unregistered mobility in Qingdao. It is necessary to point out that a large portion of mobility outside central planning often is not reflected in statistics on urbanisation, although it actually plays a substantial role in the real urbanisation process.

Table 10: Migration Trends Under the Dual-Track System

	Shandong*		Qingdao**		Qingdao***	
	In-migration (Mio.)	Rate of In-migration (%)	In-migration (Mio.)	Rate of In-migration (%)	In-migration (Mio.)	Rate of In-migration (%)
1992	0.5695	13.98	0.3081	45.79	0.1237	18.37
1993	0.6576	15.24	0.4966	73.53	0.1098	16.26
1994	0.7763	16.64	0.3602	53.08	0.1107	16.31

\* In-migration with permanent residence in the cities.

\*\* Provisional residents in the cities.

\*\*\* Provisional residents staying over one year.

Sources: China Population Statistics of All Counties and Municipalities, Beijing 1992, 1993, 1994; field survey in Qingdao.

Before the economic reforms in China, population mobility was highly controlled. It was extremely difficult for farmers to change their identity and occupation. This caused the serious surplus in rural labour. Under the condition of limited land resources, the marginal productivity of rural labour was severely reduced. If we calculate the ratio between the GDP share of an industry and its labour share, we get an indicator to measure relative labour productivity. In Shandong in 1994 it was 0.358 for agriculture and 2.028 or 1.553 for primary and tertiary industries.

One of the marked features of China's economic reform is incrementalism. Instead of reforming the old resource distribution mechanism it aims at distributing incremental resources brought forth by the reform

in the context of the market. Thus the twisted economic structure can be amended without touching vested interests. China's reform therefore is a kind of Pareto Improvement.<sup>17</sup> Migration and population mobility since the 1980s and the urbanisation process caused by it have promoted the evolution of a labour market in the manner of incremental reform.

A conspicuous trait of this reform is the fact that there is little competition between migrant and urban labour. In 1994 in Shandong, the unemployment rate was 3.1%, even lower than 1985s figure of 3.6%.<sup>18</sup> The structure of unemployment has changed, though. In the past young people just entering the labour market constituted the majority of the unemployed population. But now the unemployed are mainly people who had a job before. Interviews with the Qingdao Municipal Labour Bureau revealed that 60-70% of the unemployed had been employed before. The replacement of these people has remained a most urgent task for the labour bureau. Therefore both the labour system left over from the planning period and the more recent new regulations on migrant population have attempted to avoid competition for jobs between migrant and urban labourers.

Judged by the ownership of enterprises absorbing migrant workers, one may see another feature, namely, migrant workers tend to concentrate in economic sectors newly developed after reform. Table 11 shows much higher rates of employment for migrant labour in the categories of self-employment, private enterprises, collective enterprises, foreign owned or joint venture enterprises than the employment of Shandong urban residents in the equivalent categories. As a result, the employment rate of migrants in state enterprises is much lower than that of urban residents. Because the development of the non-state economy is accompanied by a deepening of reform, the employment opportunities and job potential for migrant workers will increase accordingly.

Table 11: **Ownership Structure of Migrant Employment in Shandong, 1994-1995**

	Self-Employment	Private Enterprises	Collective Enterprises	Foreign, Joint and Cooperation Enterprises	State Enterprises	Other
<b>Ji'nan Survey</b>	12.12	16.31	36.82	2.33	32.29	0.13
<b>Provincial Urban Residents</b>	3.69	9.34	15.64	1.50	66.82	3.14

Source of data: *Shandong tongji nianjian 1995* (Shandong Statistical Yearbook 1995), compiled by Statistics Bureau of Shandong, Beijing 1995; Ji'nan survey

The different employment structure of the rural and urban labour force makes their relation in the job market complementary. Because the growth of the non-state economy is accompanied by a deepening of economic reforms, migrant labour carries the following characteristics: First, the employment opportunities and conditions faced by the migrant population are determined by market forces. The salary determinants suggest that the salary in the non-state sector is decided by the demand and supply of labour. Table 12 indicates that a noticeable income gap exists among state, collective and other sectors. On the one hand it signifies that a certain spread of labour among different sectors in the same industry remains. On the other hand the gap reflects the fact that the state sector is determined by central planning, whereas income levels in non-state sectors tend to be determined by the market. The lower income in the collective sector in comparison to the state sector may be caused by lower levels of skill there. The comparatively higher income level in the other sectors is the result of the fact that, unlike in the traditional sectors, the labour force in new sectors usually does not enjoy other benefits or social security payments besides the salary. The coefficient of variance for average incomes in all three sectors is big. This particularly indicates their different degree of determination by market forces.

<sup>17</sup> Lin Yifu, Cai Fang and Zhou Li, *China's Economic Reforms: Pointers for Other Economies in Transition*, World Bank Policy Research Working paper, No. 1310, Washington 1994.

<sup>18</sup> State Statistics Bureau, ed., *Zhongguo tongji nianjian 1995* (China Statistical Yearbook 1995), Beijing 1995, p.107.

Table 12: **A Comparison of Annual Income in State, Collective and Other Sectors, 1994 (Yuan)**

	State Sector	Collective Sector	Other Sector
<b>Industries*</b>	16	16	15
<b>Mean</b>	4960.94	3689.62	5455.67
<b>Coefficient of Variance</b>	0.1601	0.2148	0.3686

\* The 16 industries are: 1) Agriculture (farming, forestry, animal husbandry and fishery); 2) Extraction; 3) Manufacturing; 4) Electric power, gas and water supply; 5) Construction; 6) Geological prospecting and water conservancy; 7) Transportation, storage, postal and telecommunication services; 8) Wholesale, retail trade and food service; 9) Banking and insurance; 10) Real estate management; 11) Social services; 12) Health care, sports and social welfare; 13) Education, culture and arts, radio, film and television; 14) Scientific research and polytechnical services; 15) Government agencies, party agencies and social organisations; 16) Others.

Sources: *Shandong tongji nianjian 1995* (Shandong Statistical Yearbook 1995), compiled by Statistics Bureau of Shandong, Beijing 1995, pp.41-49.

Secondly, the employment opportunities will be extended as the reform deepens. Such employment has a stable character, different from employment in the informal sectors defined by many researchers as just a venue for transitional employment. Due to the lack of Shandong data, we will use China's national data to compare employment elasticity of four sectors (table 13). This also shows the comparative advantage of the non-state sectors in absorbing labourers. These sectors enjoy higher employment elasticity than the state sectors with a declining tendency. This tendency not only reveals the potential of labour absorption in the non-state sectors but also the fact that economic development in these sectors adheres to China's comparative economic advantage - labour intensive industries which abide to the principles of market economy.

Table 13: **Employment Elasticity\* Among Four Industrial Sectors**

	State	Collective	Private	Other
<b>1986</b>	0.93	1.05	--	--
<b>1987</b>	0.88	0.97	--	--
<b>1988</b>	0.86	0.95	--	--
<b>1989</b>	0.93	0.95	--	--
<b>1990</b>	0.95	0.97	--	--
<b>1991</b>	0.89	0.95	0.88	1.06
<b>1992</b>	0.79	0.95	0.73	0.86
<b>1993</b>	0.78	1.03	0.74	1.09
<b>1994</b>	0.77	0.90	0.70	0.88

\* The ratio of employment growth rate versus growth of industrial output; industrial output value based on 1995 prices.

Source: *Zhongguo tongji nianjian 1995* (China Statistical Yearbook 1995), Beijing 1995.

#### 4.2 Impact on Places of Origin

Under such conditions and with the increase in capital investment and the adoption of new technologies in agriculture, off-farm migration will not cause any loss in agricultural production. On the contrary, the remittances migrant labourers send home and the funds they bring back will play an active role in capital accumulation for agriculture. According to the Ji'nan survey, 81.9% of out-migrant workers sent remittances home. On the average they amounted to 1753 Yuan per year, equal to 52% of their annual surplus (total income minus living costs), which was 3372 Yuan per person. Other characteristics of the remittances were: males sent more money home than females, workers further away from home sent

more than those working closer, married people sent more than unmarried ones, families with lower incomes received more than those with higher incomes.<sup>19</sup> The migrant worker's linkage with farming and agriculture was also reflected by the fact that they paid frequent visits home. The Ji'nan survey showed that 57.6% of them went back home at least once a year during the busy season. 95.7% of them went home once a year at various times. This phenomenon has something to do with their unchanged status. Because of the highly controlled household registration system, their mobility has a temporary nature. The families of migrant workers therefore are not able to leave the countryside for good, thus entirely separating themselves from agricultural production activities. Once this ever becomes possible, they would lease their contracted land to other people. Economics of scale in agriculture then could be improved.

Observing the effects of migration on both places of destination and origin, we find that it will narrow the gap of development levels and incomes from two ends. In theory, two mechanisms are at work. One has to do with the formation of an universal national market. Through regional exchange of products in abundant supply for scarce key items, each region can make full use of its comparative resource advantage. This process will eliminate the price differences of key elements of productivity in different regions.<sup>20</sup> The other mechanism at work concerns the formation of a market for key production elements. The exchange of such elements among different regions levels imbalances between different types of ownership in industry. More active elements with less market barriers enter the market before others. This, on the one hand, raises the income level in areas with a lot of surplus labour, while on the other hand, it serves to dampen income increase in areas where labour is relatively scarce.

## 5 A Brief Conclusion

In the socio-economic background of migration and population mobility, there is no noticeable distinction between Shandong and other regions of the country. Both types of movement occur on a scale which is determined by the easing of long-time policy restrictions in the era of reforms. The migrants in the province therefore experience the same push and pull forces as migrants in the entire nation. The above analysis of migrant features shows that they are comparatively more productive and dynamic than the general population. Macro-analysis indicates that population and labour mobility outside the traditional channels of planned migration have played an active role in speeding up China's urbanisation process, raising agricultural productivity and narrowing the discrepancy of incomes and economic development levels between different regions. As Shandong is one of the provinces with the fastest economic growth, the gap in development and income levels within the province is not as great as in the nation as a whole.<sup>21</sup> The data collected at the provincial level and the material from the Ji'nan and Qingdao surveys therefore indicate that the scale of migration and population mobility in the province is comparatively small and orderly. This lowers mobility risks and conflict costs while it leads to more efficiency. It also has less negative impact on the normal life and production in the cities. City administrations and residents are therefore more receptive of migrants, which avoids some sharp conflicts caused by the sudden and rapid increase of migrant population in extra-large cities like Beijing and Shanghai. It is this kind of migration and population movement in a stable and orderly manner that will, over the long term, make a sustainable population mobility at a larger scale possible in Shandong.

Because of the tremendous motivation behind migration and labour mobility, the scope and scale of migration has been rapidly expanding since the mid 80s nation-wide. This has led to two conflicting policy-making tendencies. From the perspective of city administrations, governments in places of destination tend to issue regulations that limit the move by raising migration costs. But other policies are pursued by governments in places of origin. In order to increase the farmer's income and narrow the gap in regional development levels, they tend to encourage population mobility. In some places, local governments actively provide information and training to migrants. The central government, which is affected and restricted by both tendencies, is trying to devise a policy that will guide population mobility in an orderly and controlled manner without bringing an end to it. Studying the relatively orderly process of population mobility in Shandong may make some contribution to this endeavour.

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<sup>19</sup> Liu, *Rural-Urban Migration Sample Survey in Ji'nan Municipality of China: Sample Design and Preliminary Results*, Ji'nan 1995 (unpublished paper).

<sup>20</sup> Ohlin, *Interregional and International Trade*, Cambridge, Mass. 1968.

<sup>21</sup> For instance, in 1993 the coefficient of variance for per capita GDP distribution in the 30 provinces, autonomous regions and cities under central administration was as high as 0.685. Shanghai had the highest per capita GDP (11700 Yuan) and Guizhou the lowest (1034 Yuan, only 8.84% of the former). The coefficient of Shandong in 1994 was 0.570. Within Shandong, Dongying had the highest per capita GDP (11813 Yuan) and Heze Prefecture the lowest (1673 Yuan, 14.17% of the former).