Chapter 4
How China's "Floating Population" Floats: Recent Patterns in Migrant Workers' Spatial Mobility and Destination Choice

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Abstract This chapter estimates the effect of individual and regional attributes on income and job prestige using an original data set containing detailed working histories of approximately 2,300 temporary rural-to-urban migrants. Migrant worker job transitions are examined through time, as well as associated changes in prestige scores. An augmented Mincer model is utilized to explore the extent to which personal characteristics and job history determine earnings. Returns to education and work experience are estimated and compared with data sets on urban resident. The results highlight gender segregation in occupational structure and patterns of change, but show no overall difference in the average perceived job prestige between men and women. While the notion of local-migrant wage disparities is supported by this study, returns to work experience and education of migrants and locals were comparable. It is found that rural work experience contributes very little to migrant worker earnings. Such findings contribute to a richer understanding of an important and diverse labour force too often mischaracterized as static and homogenous.

4.1 Introduction

China's "floating population" or migrant workers (*liu dong ren kou* or *mingong* in Chinese *pinyin*) are a transformative economic force. The 140-million strong working force (NBS 2009) provides China a variety of services at low cost – they construct skyscrapers, assemble ubiquitous 'Made-in-China' products, and are a driving force behind China's spectacular growth and maintain the global competitiveness of manufactured goods. Beyond city walls, remittances earned by migrant workers are an important source of income for rural areas, contributing an estimated one-third to

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40 % of the rural net income (Wang 2010). However, due to their official migrant status, migrant workers face widespread occupational and wage discrimination (Knight and Yueh 2003; Liu 2005). According to a survey conducted by the All-China Federation of Trade Unions in 2006, about 65 % of migrant workers took so-called "Three-D jobs" i.e. jobs that are dirty, dangerous and demeaning (Tao 2006). They work longer hours and receive lower wages than their urban counterparts, with over 80 % of migrant workers working 7 days a week (Shi 2008). Despite a recent increase in local minimum wages in many Chinese cities resulting from new labour laws, migrant workers' minimum wages are set at just 40–60 % of the average local wage (Pai 2010).

In spite of these issues, there is a shortage of quality data on this important subset of China's working population, especially a complete set of data about how their migration outcome is associated with their employment history, social network, family background at both the place of origin and destination. In both the academic literature and the media, the majority of studies are based on individual and small group accounts of occupational mobility, socio-economic progression, and employment experiences (see Zhou et al. 2007; Chen 2010; Han et al. 2011). Other reports reveal motivations for migration and the causes of poor treatment at destinations (Hare 1999; Solinger 1999; Zhu 2002). The quantitative studies that do exist rely on cross-sectional data in which rural-to-urban migrants are not disaggregated from urban-to-urban, urban-to-rural, or rural-to-rural migrants (Démurger et al. 2008; Shi 2008; Knight and Yueh 2003; Hare 2002; Powers and Seltzer 1998; Cao and Hu 2007).

There are key practical difficulties in the study of migrant workers that explain why this gap in the literature has persisted. As many researchers in the field acknowledge, the high mobility and employment instability of migrant workers have meant that formal statistics and global surveys covering this population are non-existent (Zhu et al. 2009). Moreover, migrant workers' economic activities often go unrecorded as they are frequently employed in the informal sector, often change jobs and employment location, or otherwise do not properly register with their host city (Roberts 1997). In addition, many studies on migrant workers are location-specific and therefore underplay the importance of spatial disparities and the differential effects of sending and receiving regions. Lastly, despite acknowledging the role of human capital and other individualistic traits of workers in determining their occupational opportunities (Hu 2008; Zhao 2003), studies still place most emphasis on the importance of institutional factors. This leads to broad characterisations of migrants as poorly paid, engaged in highly labour intensive, and unstable jobs, with little room for upwards mobility (Zhao 2005). Therefore, factors such as high mobility, job instability and tendency of migrant workers to find employment in informal sectors make quality data on this population difficult to obtain. This has caused large gaps to persist in the literature surrounding the spatial and social mobility of migrant workers based on large scale survey data.

This study hopes to develop understandings of migration in China through the support of a recent, original data set constructed from samples across a wide spatial range. The survey, taken in early 2009, spans 143 rural villages from 24 provinces,

and includes 2,543 participants. By taking Bertaux-Wiame's (1979) life course approach which examines an individual's life history and sees how early events influence future decisions and events, the original data is used to offer a unique perspective on recent patterns concerning the spatial mobility of migrant workers. A key attribute of the dataset facilitating this analysis is its inclusion of participants' individual characteristics, working history, and home village attributes. Such insight is comparatively difficult to achieve with the data sets commonly used in the literature, which frequently do not distinguish rural-to-urban migrants from other forms of migration. This study will investigate factors influencing destination choice of workers, including the effects of accumulated experience, attributes of sending and receiving regions, distance, and individual specific factors (education, social networks, gender, means of job acquisition, age). The aims of this study are: (a) to explore recent patterns in the internal migration of China's migrant workers; and (b) to test the hypothesis of whether a life course perspective is relevant to the understanding China's internal migration patterns.

4.2 Research Methods

4.2.1 Survey Design and Data Collection

Data collection was organized and funded through an Australian Research Council Discovery Project in January–February 2009 when the global financial crisis hit China. The survey consisted primarily of three parts, comprising answers from 2,543 migrant workers. The three sections of the questionnaire consisted of a village description, the individuals' personal attributes, and their working history. To overcome some of the difficulties of data collection previously mentioned, a creative sampling method was used whereby university students studying at two universities in Kaili City (Kaili College and Kaili Technology College) in Guizhou Province. Students were employed as interviewers and they came from a diverse range of villages across China. This approach provided convenient access to a great many rural locations that would have otherwise been difficult to include in the sample. The use of local students as interviewers, who were familiar with their home village and dialect, was also seen as crucial to enhance the reliability of responses.

The migrant workers were surveyed at their home villages during the Chinese New Year in 2009. This is China's longest public holiday and, for the majority of migrant workers, the only chance to return home in the year. It is precisely for this reason that the surveys were conducted during this period. In total, 143 rural villages in 24 of China's provinces were included in the sample (we take provinces to include regular provinces such as Guangdong, autonomous regions such as Xinjiang, and centrally administered municipalities such as Beijing) (see Fig. 4.1). The sample's spatial coverage is one of the key strengths of this data set though it may not be perfectly representative. Due to restrictions of finance, available time and

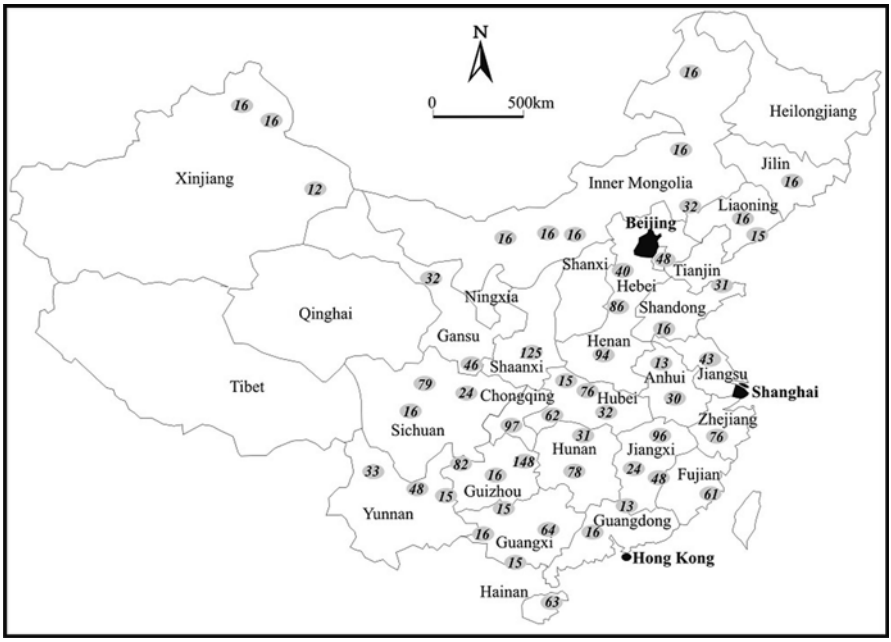

Fig. 4.1 An approximate spatial distribution of the sampled migrant worker's home villages across China

interviewees, there were no strict sampling quotas set. The proportions of migrant workers surveyed at each location, and the number of student interviewers deployed at each location followed loosely the distribution of migrant workers across provinces and villages.

To enhance sampling fidelity, all interviewers attended a day course on the procedure of selection and interviewing of migrant workers at each village. Steps were also taken to remove biases from the selection procedure of study participants by instructing interviewers to survey households randomly in one of every three houses in sequence. However, if the house was empty, or there were no migrant workers in the household or in cases where migrant workers did not wish to take part, which was very uncommon, interviewers would move on to the next household in the sequence until a response was recorded. Though far from being perfect, this method was able to avoid over-representation from groups of friends, family members or neighbours of the interviewers. Consequently, a relatively even spread of respondents was obtained.

4.2.2 Quantitative Approach

In any migration process, the stages of mobility are likely affected by a variety of life cycles, economic and other factors (Rephann and Vencatasawmy 1999). Among these are marriage, divorce, birth and aging of children, completion of schooling, and

retirement. Other potentially important personal characteristics include employment status, earnings, education, accumulated skills and training, job tenure, age, sex, and health (Greenwood 1997). This paper identifies many of these factors and incorporates them into models that estimate their impact on destination choice.

The complexity of the dynamic processes affecting migration requires a methodologically rigorous, computationally tractable and theoretically sound modelling framework (Pellegrini and Fotheringham 2002). Also, as individuals are assumed to migrate with the perceived situation improvement and benefits or utility which depend on a number of factors, it is necessary to relate their spatial behaviour to both regional and individual characteristics. This spatial behaviour can influence migrants' spatial choice models.

To understand the choice made by an individual faced with a set of alternative destinations a decision rule that describes how a unique choice is achieved is required (Pellegrini and Fotheringham 2002). The concept of utility helps to build assumptions whereby individuals are perceived to apply an assessment framework when evaluating alternatives. The assessment is expressed through a scalar value of utility representing the attractiveness of an alternative as a function of relevant variables associated with the choice (Ben-Akiva and Lerman 1985). Variables included in this function may be those already discussed in previous sections, for example distance, job availability, expected earnings, or available social network. The assumption is that migrants make their decisions based on the associated utility of each alternative. Therefore, modelling utility can help build an understanding of destination choice.

This paper presents results from two statistical analyses combining the ideas of life course attributes and utility of destination choice. The first model consists of a simple multiple regression on the distance of migration (a numerical variable), while the second model is a multinomial logit regression on the choice of destination (a categorical variable). Independent variables consist of individual-specific and regional-specific demographic and socio-economic characteristics that are likely to influence a person's desire to migrate.

Multiple regression models are well suited for modelling numerical data such as travel distance. The presented multiple regression model is based on a robust regression method of iterated re-weighted least squares. Such methods are appropriate for data sets, such as that used by this study, which exhibit heteroscedasdicity in residual deviations. Multinomial logit regression (MNL) has been widely used throughout the literature in modelling discrete choice. MNL techniques are computationally efficient and can be used to explore both individual specific variables – variables that do not depend on the choice made – such as gender, or age; as well choice specific variables – variables that do depend on the choice – such as the distance of a destination choice from the migrant's place of origin or the level of economic development at the destination.

Choice specific variables were included based on their relevance to past models applied to spatial data in China (e.g. Fan 2005), as well as their inclusion in migration studies external to China (Rephann and Vencatasawmy 1999; Greenwood 1997). Choice-specific and individual-specific variables included in the model are listed in Table 4.4 in the next section.

One frequently cited limitation of MNL models is its Independence of Irrelevant Alternatives (IIA) property that, when invalid, can lead to erroneous predictions of spatial choice (Pellegrini and Fotheringham 2002). To overcome this limitation a Hausman-McFadden test was applied to the fitted model to assess the validity of the IIA assumption. Tests concluded that there was no evidence (at the 0.05 significance level) to suggest that the IIA assumption had been breached.

Locations of home villages and receiving locations are coded at the town (city, village) level accurately. The resolution of co-ordinates allows for distance models to be fitted. For the spatial choice models, China's receiving regions are divided by province (with the exclusion of Tibet, Ningxia, Qinghai and Anhui which possessed too few responses to estimate model parameters).

4.3 Results and Discussion

Table 4.1 describes some characteristics of migrant workers in the sample by gender. The mean time since entering urban employment was less for women. On average, men in the sample were older than women, reflecting the higher proportion of

Table 4.1 Summary statistics of sample population

Characteristics	Female (n = 901)	Male (n = 1,642)
Mean:		
Years since entry into urban labour force	4.36	6.14
Age at survey	28.6	32.7
Education level[a]	3.19	3.07
Jobs reported	2.35	2.53
No. of provinces at which employed	1.51	1.62
No. of cities at which employed	1.86	1.96
Job length (years)	2.62	3.17
Median:		
First job (currency in CNY):		
Monthly income	1,000[b]	1,000[b]
Monthly income (inflation adjusted)	1,029	1,043
Hourly wage	3.61	4.00
Hourly wage (inflation adjusted)	3.74	4.06
Job at survey (currency in CNY):		
Monthly income	1,200	1,500
Monthly income (inflation adjusted)	1,252	1,529
Hourly wage	5.00	6.00
Hourly wage (inflation adjusted)	5.00	6.11

Notes: [a]Education level was scored from 1–5: less than primary = 1; primary = 2; junior high = 3; high = 4; college or above = 5

[b]Both male and female use 1,000 Yuan as a base figure for comparison purpose

young women in the work force due, in part, to the domestic role expected of married women (Fan 2003). Both men and women had usually attained a junior high school level of education. Men reported slightly more jobs on average and had worked at more provinces and cities than women. This may have been a consequence of the men's longer time spent in the urban labour market or greater prospects for job change, as well as the tendency for women to exit the labour market early due to domestic responsibilities (Fan 2003). Both women and men had attained a similar level of education.

From Table 4.2, it can be seen that the coastal regions absorb over half of the migrant workers in our sample. This share of migrant workers is noticeably less than that reported by other studies. A survey collected in 2007 conducted by XinNongMen (2008) found that the Yangzi River Delta, the Pearl River Delta, and Bohai Rim Region (Beijing, Tianjin, Shandong, Hebei, and Liaoning), together absorbed an estimated 82.6 % of the migrant labour force compared to only 59.5 % as estimated by our sample. This may be related to the sample representativeness of two different surveys, and in some degree reflect a growing shift towards greater inland city employment since 2007. Indeed, some inland provinces, such as Sichuan, Shaanxi, and Guizhou, show signs of an increasing share of migrant workers. This finding is supported by Wang (2010) who argued three key factors have likely increased inland migration. These include: (a) recent job creation policies of inland provinces; (b) the Chinese government's US$586 billion economic stimulus package (of which a considerable portion went to inland and rural infrastructure); and (c) the lower travel costs associated with working closer to home.

Not surprisingly, distance is an important cost that must be considered against the expected employment prospects associated with a destination. This is clearly illustrated in Table 4.2 and Fig. 4.2. Although distance we used is not an ideal variable as convenience of travel and travel time, it can be calculated simply. It is unrealistic to collect large sample population's information about each of their travel's time and convenience. Migrants from coastal regions travel the shortest distance and generally work in their origin province, while migrants from inland regions, on average, need to travel greater distances. Such patterns broadly reflect the uneven distribution of employment opportunities due to the concentration of industries along China's eastern coast. Importantly, a considerable proportion of migrants from inland destinations opt for closer employment. For example, 22 % of migrants from Central China remain in this region, compared with only 7 % of the total sample.

The following explains results obtained after regressing distance travelled by individual migrants on a number of variables capturing aspects of their life course and demographic backgrounds. Table 4.3 lists the variables included in the model, their associated unit or level of measurement, and an estimation of the respective effect size they produce in the response variable (relative to a reference level for categorical variables). Many of the variables included produce large, statistically significant effect sizes, while others do not.

The *origin province* variable was a categorical variable expected to capture varying economic and spatial conditions of sending provinces. The estimates of effect

Table 4.2 A spatial transition matrix summarizing choice of employment destination by origin

			Destination (%)											
			Coast					Inland						
			GD	SC	LYD	B-T	NC	C	S-W	N-W	XJ	N-E	Total	No.
Origin	Coast	GD	100	0	0	0	0	0	0	0	0	0	100	27
		S C	48.5	40.0	6.5	0.3	0.3	2.1	1.8	0.6	0	0	100	340
		LYD	2.7	0.7	82.3	3.4	2.7	4.1	2.0	0.7	0	1.4	100	147
		B-T	0	2.2	0	86.7	11.1	0	0	0	0	0	100	45
		N C	5.5	0	4.5	13.5	66.5	1.5	1.0	2.5	0	5.0	100	200
	Inland	C	32.8	4.5	23.8	5.4	3.9	22.4	4.2	2.3	0.5	0.2	100	597
		S-W	30.8	6.6	21.0	2.0	2.5	2.5	31.7	2.1	0.5	0.2	100	561
		N-W	14.5	3.8	11.9	7.2	8.2	0.9	1.3	49.4	2.2	0.6	100	318
		XJ	4.8	0	4.8	0	2.4	0	9.5	9.5	69.0	0	100	42
		N-E	1.5	1.0	2.0	3.6	19.3	1.5	1.5	1.0	0	68.5	100	197
		Total	25.3	8.7	18.4	5.9	9.9	6.9	9.1	8.0	1.7	6.1	100	2,474

Notes: In order to simplify the table, while maintaining areas of significant interest, provincial regions are grouped as five coastal regions – *GD* Guangdong, *LYD* lower Yangzi delta (Shanghai, Zhejiang and Jiangsu), *B-T* Beijing-Tianjin, *SC* other Southern Coastal, *NC* Northern Coastal, *C* Central China, *N-W* Northwest China (including the north China provinces of Shanxi and Inner Mongolia), *S-W* Southwest China, *N-E* Northeast China, *XJ* Xinjiang

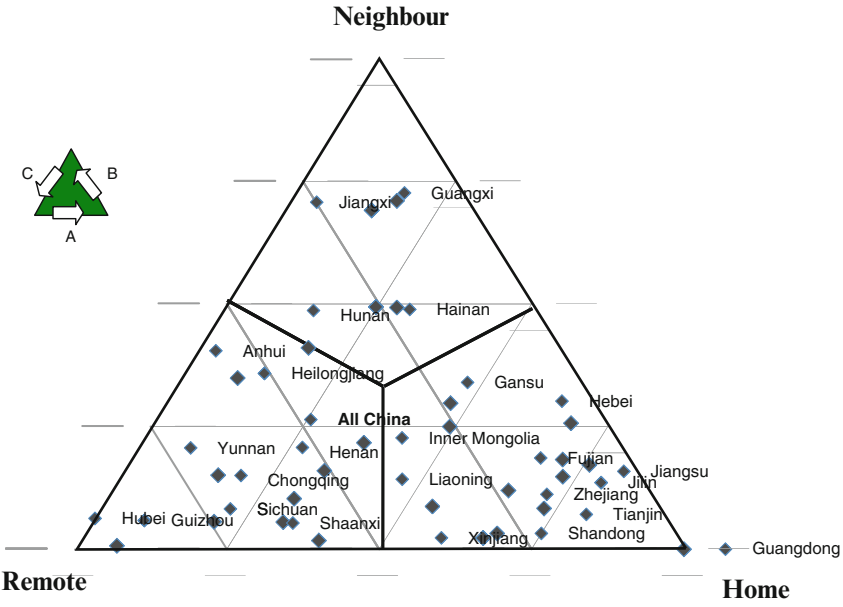

Fig. 4.2 The migration decision in three destination choices (Note: Three choices are: (*a*) remaining in origin province (*Home*); (*b*) migrating to neighbouring province (*Neighbour*); and (*c*) migrating to non-neighbouring province (*Remote*))

sizes do not strongly deviate from expectations. In general, migrant workers belonging to provinces with greater economic productivity have greater access to labour markets, which is represented by the lower average distance travelled by migrants from regions such as Fujian, Jilin, Shandong, Tianjin, Hebei, or Jiangsu. Other effects amplifying this pattern are likely to include the density of development, which affect the local proximity of rural areas to urban zones, as well as regional differences in public services like transport, education, and health care, which, depending of their quality, can encourage or restrict mobility.

Out of the variables associated with labour productivity, *education*, *work experience*, *job number* and *age*, significant effects were only detected for *work experience* and *age,* which were both negatively related to distance travelled. Both *work experience* and *age* produce a negative effect on the dependent variable – they are both associated with reduced distance travelled. The figures suggest that as migrant workers grow older and gain more urban experience, there is an associated preference to work in cities closer to home, reflecting an increase in job opportunities in smaller cities. Three key factors help to explain this pattern.

Firstly, skill and experience accumulation in coastal regions increase a migrant worker's chance of finding a reasonably paid job closer to home, where family or other important social connections remain. This notion is supported by the decreased distance travelled by those who find employment themselves (see parameter estimates for *job acquisition*) the number of which increase with each year of work experience.

Table 4.3 Determinants of the distance of migration

	Level/(unit)	Estimate	Std. error	t-value	p-value	Sig
(Intercept)		481.3161	95.2194	5.0548	0.0000	***
Job number	(no.)	0.2685	6.0625	0.0443	0.9647	
Job acquisition (ref: relative or friend)	Agent	95.3921	33.3243	2.8625	0.0043	**
	Job ad.	−39.2292	25.1022	−1.5628	0.1188	
	Gov.	−58.8862	55.2282	−1.0662	0.2847	
	Employer	−31.2552	35.9855	−0.8685	0.3849	
	Themselves	−105.6164	26.7637	−3.9463	0.0001	***
	Other	−18.5574	14.7325	−1.2596	0.2079	
Education	(1: primary−>5 college)	0.2837	8.4045	0.0338	0.9730	
Children	(no.)	0.7233	8.5205	0.0849	0.9323	
Work exp.	(Years)	−4.3352	1.5566	−2.7850	0.0054	**
Household income	(Yuan)	−0.0002	0.0003	−0.9479	0.3432	
Job category[a]						
Wage adjusted	(Yuan)	11.3092	1.1627	9.7268	0.0000	***
Gender	Male	−20.3271	14.6917	−1.3836	0.1665	
Age at job	(Years)	−3.4981	0.9313	−3.7563	0.0002	***
Marriage status (ref: single)	Married	11.1465	20.0587	0.5557	0.5784	
	Divorced	51.0622	48.3579	1.0559	0.2911	
Origin province (ref: Guangdong)	Anhui	462.1416	91.7447	5.0373	0.0000	***
	Chongqing	557.0813	82.9454	6.7162	0.0000	***
	Fujian	30.5519	83.4910	0.3659	0.7145	
	Gansu	308.1227	86.8423	3.5481	0.0004	***
	Guangxi	316.0512	80.8883	3.9073	0.0001	***
	Guizhou	506.5527	79.4749	6.3737	0.0000	***
	Hainan	405.1774	81.5782	4.9667	0.0000	***
	Hebei	63.8594	83.4926	0.7649	0.4444	
	Heilongjiang	482.2873	88.2146	5.4672	0.0000	***
	Henan	415.1897	79.8071	5.2024	0.0000	***
	Hubei	588.1784	80.7445	7.2844	0.0000	***
	Hunan	341.4904	82.1119	4.1588	0.0000	***
	Inner Mongolia	319.1442	82.1507	3.8849	0.0001	***
	Jiangsu	110.0535	91.9654	1.1967	0.2315	
	Jiangxi	189.2179	81.0184	2.3355	0.0196	*
	Jilin	−12.1845	87.7555	−0.1388	0.8896	
	Liaoning	65.5901	85.2672	0.7692	0.4418	
	Shaanxi	845.7576	80.4977	10.5066	0.0000	***
	Shandong	58.3832	97.0022	0.6019	0.5473	
	Sichuan	654.9425	80.3965	8.1464	0.0000	***
	Tianjin	−37.5483	89.7996	−0.4181	0.6759	
	Xinjiang	273.1836	100.9729	2.7055	0.0068	**
	Yunnan	936.7740	82.1771	11.3995	0.0000	***
	Zhejiang	179.9692	86.0268	2.0920	0.0365	*

Notes: Significance levels: *0.05, **0.01, ***0.001

[a]Coefficients for job categories are not presented

Secondly, recent economic growth in China's non-coastal regions has seen the creation of new economic opportunities. In the last decade, the state has implemented development initiatives such as the Grand Western Development Strategy and the Strategy for the Revitalization of Northeast China (further propelled by recent economic fiscal stimulus invested in rural infrastructure). In directing resources towards inland regions, an increase in economic opportunity has inevitably followed.

Thirdly, this result is likely to reflect the changing work preferences of a new generation of migrant workers. There have been reports that younger migrants desire to permanently settle in cities more than their predecessors (Na 2010). Much of this younger generation have never experienced agricultural work and are less strongly bonded to their rural homes. Our sample contains a mix of both older generation migrant workers and new generation workers and so differences in preferences between the groups. In reality, both the changing preferences of a new generation of workers, as well as the enhanced employment options available to older and more experienced migrant workers are likely to play a role in destination choice. Indeed, of the 3,471 job changes reported by individuals in the sample, only a third of the changes occurred in destinations further away from their home villages, with the overwhelming majority tending to move work closer to home.

With respect to earnings, *household inc.* did not produce a significant response in the distance variable. However, the variable for urban earnings, *wage adjusted*, did exert a large effect. This suggests that while household income does not significantly influence the distance of the employment destination, higher wages are associated with greater travelling distances.

Interestingly, other life course variable, including *gender*, *children* and *marriage status*, produced no significant results. It has been widely documented that family structure of migrant workers typically consist of either one or both parents working away from home with either the remaining spouse or grandparents staying to look after the household and children (e.g. Fan and Wang 2008). The overall lack of explanatory power of these variable in the model may suggest that family structures are increasingly flexible and diverse, with families adapting to working situations rather than employment changing to suit the household situation. At least two studies have documented the increasing trend of family migration in past decades (Hong 2007; Zhang and Li 2010).

The choice of destination is predicted by the MNL model summarized in Table 4.4. As our data does not contain information of the volume of flows, it is best suited to analysis of the direction of flows, which can be provided by choice models. Such analysis complements the previous outputs from the linear model fitted to the distance of migrant destinations, which said little of the direction of migration. As to the previous model, the choice model will be built around the concept of utility.

Table 4.4 presents the parameter estimates for the effect of choice-specific variables (distance of destination, relative trade volume, and relative urban income) and individual-specific variables (education, age, work experience and whether the job was found through their social network). All three of the choice specific variables are found to be significant to the 99.9 % confidence level. As expected, distance of

Table 4.4 Individual and choice specific determinants on destination decision

Distance (kms): −0.0029 (0.0001)***		Trade volume: −0.0059 (0.0008)***		Av. Urban Inc.: 3.9254 (0.7204)***	
	Intercept	Education	Age (years)	Work experience (years)	Non-network
Beijing	−5.0686	0.0198	0.0166	0.0478	−0.3523
	(0.8912)***	(0.1823)	(0.0163)	(0.0314)	(0.2815)
Chongqing	−5.3632	0.0833	0.0506	0.0805	−0.0441
	(1.0319)***	(0.2053)	(0.0201)*	(0.0334)*	(0.3414)
Fujian	−0.1666	−0.3881	−0.0165	0.0638	0.0828
	(0.5844)	(0.1261)**	(0.0128)	(0.0194)**	(0.2074)
Gansu	−1.3924	−0.951	0.0273	0.0893	0.5187
	(1.3359)	(0.2548)***	(0.0283)	(0.0416)*	(0.4634)
Guangxi	−5.607	0.5356	0.0508	0.0454	−0.4215
	(1.0718)***	(0.2244)*	(0.0226)*	(0.0384)	(0.3658)
Guizhou	−4.1648	0.0086	0.0514	0.119	−0.0674
	(0.8859)***	(0.1647)	(0.0167)**	(0.0259)***	(0.2747)
Hainan	−2.8052	−0.2309	−0.0039	0.1097	0.1169
	(1.2327)*	(0.2287)	(0.0311)	(0.0455)*	(0.3656)
Hebei	−2.1215	−0.3427	0.042	0.0929	−0.3982
	(0.8306)*	(0.168)*	(0.0145)**	(0.023)***	(0.2686)
Heilongjiang	−4.3454	0.2009	0.0366	0.1493	0.1448
	(1.5994)**	(0.3446)	(0.0253)	(0.0488)**	(0.4657)
Henan	−1.9837	−0.1643	0.0064	0.106	−0.1217
	(0.8195)*	(0.1611)	(0.0151)	(0.0228)***	(0.2578)
Hubei	−6.1264	0.3219	0.0579	0.0743	0.4657
	(1.277)***	(0.2443)	(0.0219)**	(0.0361)*	(0.4378)
Hunan	−6.017	0.7479	0.0337	0.039	−0.4707
	(1.1707)***	(0.2252)***	(0.0226)	(0.0412)	(0.3721)
Inner Mongolia	−4.5113	0.0066	0.0613	0.0882	−0.1417
	(0.9648)***	(0.1966)	(0.0173)***	(0.0298)**	(0.3228)
Jiangsu	−1.1549	−0.3246	−0.0114	0.0511	0.0486
	(0.648).	(0.1381)*	(0.0136)	(0.0222)*	(0.2192)
Jiangxi	−2.3655	−0.3365	−0.0003	0.1129	0.097
	(1.3401).	(0.2724)	(0.0281)	(0.0343)***	(0.4654)
Jilin	−1.0411	−0.4661	0.0503	−0.1709	0.2529
	(1.1709)	(0.2514).	(0.0179)**	(0.0834)*	(0.3328)
Liaoning	−0.7783	−0.398	0.0079	0.0356	0.2552
	(1.038)	(0.2265).	(0.0172)	(0.0361)	(0.3087)
Shaanxi	−4.6865	0.1123	0.0474	0.1401	−0.052
	(0.8495)***	(0.1639)	(0.0162)**	(0.0228)***	(0.2655)
Shandong	−4.9291	0.3941	0.0459	0.0075	−0.473
	(0.9259)***	(0.1893)*	(0.016)**	(0.036)	(0.298)
Shanghai	−3.6989	−0.3411	−0.004	0.0337	0.144
	(0.9863)***	(0.1925).	(0.0184)	(0.0315)	(0.3088)

(continued)

Table 4.4 (continued)

Distance (kms): –0.0029 (0.0001)***		Trade volume: –0.0059 (0.0008)***		Av. Urban Inc.: 3.9254 (0.7204)***	
	Intercept	Education	Age (years)	Work experience (years)	Non-network
Shanxi	–5.5803	0.0472	0.0899	0.0784	–0.9411
	(1.3481)***	(0.2719)	(0.0219)***	(0.0371)*	(0.4595)*
Sichuan	–3.2713	0.0939	0.0102	0.1183	–0.2561
	(0.8774)***	(0.1614)	(0.018)	(0.0278)***	(0.2638)
Tianjin	–4.8607	0.0751	0.0187	0.1567	–0.1241
	(0.8484)***	(0.1809)	(0.0166)	(0.0229)***	(0.2923)
Xinjiang	–0.3841	–1.3207	0.0855	0.0103	1.6734
	(2.1555)	(0.3602)***	(0.0448).	(0.0805)	(0.7242)*
Yunnan	–4.844	0.0973	0.0444	0.1165	–0.0128
	(1.0788)***	(0.2242)	(0.0233).	(0.0365)**	(0.3564)
Zhejiang	–1.4536	–0.2479	–0.0057	0.0481	0.0286
	(0.5102)**	(0.0995)*	(0.01)	(0.017)**	(0.1626)

Notes: Brackets contain standard error of parameter estimate. Only results statistically significant at the a = 0.10 are recognised. Significance levels: *0.05, **0.01, ***0.001

destination had a negative effect on the net utility of the choice, and in combination with the previous model, can be confirmed as a significant cost in the migration decision. Also unsurprising was the large positive effect of the difference in average earnings at the destination as compared with the origin province. In contrast to these results, the estimated effect of regional differences in trade volume (import and export volume) is more difficult to interpret. Contrary to expectations, the parameter was estimated to be negative. However, the effect size produced by relative trade volume is three magnitudes smaller than the effect produced by relative urban income. This suggests that in considering migration choices, income gaps are still the critical factor.

Individual specific parameters estimate the effect of each variable on the likelihood of selecting a specific destination (relative to the reference choice, Guangdong). From the MNL output we can see the estimated effect of *education* on destination choice, with some key receiving provinces such as Fujian, Zhejiang, Shanghai, Jilin, and Xinjiang appearing to decrease in attractiveness as education increases, and migrants tending to favour cities in Guangdong, Beijing, as well as inland areas. This may reflect the tendency of highly educated migrants to pursue business or self-employment in some form. Indeed, at least 9 % of migrants in the category for the highest educated are small business owners, compared with only 3–4 % in all other categories of education attainment. Results may also suggest that highly educated migrants have more freedom in the destination choice when compared with other migrants whose lack of skills restricts their choices.

The effect of social networks versus other job acquisition method is less noteworthy. Statistically significant effects were only measureable for two provinces,

Xinjiang and Shandong. For the larger provinces, whether or not migrants depended on their social network for job seeking or used some other means to find work did not increase the chance of migration.

In the distance model it was concluded that greater age and work experience are associated with shorter migration distances. In the MNL model, the parameter estimates for work experience are almost all positive, suggesting that the likelihood of choosing provinces other than Guangdong increases with work experience. Work experience increases the likelihood of selection most for the destinations Tianjin, Heilongjiang, Shaanxi, Guizhou, Sichuan, and Yunnan – a pattern reflecting the increased tendency for migrants to work away from the largest, most industrialized cities as they gain experience.

The estimates for age are similarly telling of the choices migrant workers make as they progress though their careers. As with work experience, greater age is associated with the increased likelihood of selecting non-coastal destinations for employment. The five destinations whose chance of selection increased least with age were Fujian, Jiangsu, Zhejiang, Shanghai, and Hainan – all of which are highly developed coastal provinces. In other words, older migrants are less likely to select these coastal provinces than younger migrants. This result can be interpreted in a way similar to findings of the distance model. That is, the effect of two factors: the different preferences of new generations of migrant workers; and the shift towards inland employment as migrants progress through their working lives.

4.4 Conclusion

This study appreciates the complexity inherent in migration decisions, which span different timescales and spaces, and involve much information on the potential alternatives. To make analysis feasible, a focus on the distance of migration and the choice of working province was deemed appropriate and a simple conceptual model of the migration choice was employed. While many approaches to quantifying migration have been taken in the literature, our methodological approach focused on implementing distance models and discrete choice models to process the data and observe patterns in spatial mobility. Variables considered in the process of spatial choice consisted of individual-specific and regional-specific demographic and socio-economic characteristics that are likely to influence a person's desire to migrate.

The broad aims of this study were to contribute to a more useful description of recent patterns in the spatial mobility of migrant workers, and test the relevance of a life course perspective. From these aims, several key findings have emerged from this study. Firstly, while the major cities of eastern coast still absorb the majority of migrant workers, there are signs that their share of the population is decreasing. As a result of trends in government spending and development policy, entrepreneurialism opportunities in inland China have increased; somewhat lessening the effect of

provincial disparities on the migration decision. The net effect is that distance becomes a relatively important consideration in the choice of destination. Also contributing to this trend was the potential of China's increasing education standards to enhance the number of employment options available to migrants.

In support of a life course perspective, age and accumulated work experience were found to be important in understanding spatial choice. It was argued that the costs of distance increases with age due to life course factors as well as the changing life style preferences of a new generation workers (however, no effects were detected for gender, marriage status, and number of children). Moreover, regional differences in the potential to realize earnings can be lessened by increased work experience and human capital accumulation, which create a pathway to entrepreneurialism and other employment opportunities not previously available. The net-effect is that as migrant workers move through their working lives and accumulate experience there is an increased preference towards inland employment, closer to the majority of migrant workers' home villages.

The richness of the data-set, and the research's interest in the personal attributes and life course of migrant workers have helped to characterize this population beyond the commonly assumed notion of being a generally static, passive and homogenous workforce. These findings describe recent trends in the flow of migrant workers and, as such, will be immediately useful to policy makers and urban planners. With regards to the present literature on migration in China, the findings of this study support the notion that life course considerations are important in the explanation of migration patterns, and that such a view will be important in future studies on migration.

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