Interprovincial Return Migration in China: Individual and Contextual Determinants*

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*This research is supported in part by grants from the National Institute of Health (1 R29 HD34878-01A2) and the National Science Foundation (SES-0718083).

ABSTRACT (149 words)

This paper provides a systematic analysis of inter-provincial return migration to Sichuan province, a most important migrant-sending province in China. Using the 1995 China 1% Population Sample Survey data, we developed an innovative method to identify return migrants along with active migrants from Sichuan who remained in their destinations, which enables us to investigate the selectivity and determinants of return migration at various levels. We find that return migrants tend to be negatively selected in age and education. Results from multi-level models show that the labor market conditions as well as migrant networks in the destination areas play important roles in return migration behavior. Poorly educated migrants who resided in places with high unemployment rates are more likely to return than well educated migrants. We also examine return migrants' participation in non-farm work, but did not find significant difference in the probability of participation between return migrants and non-migrants.

The rise and the magnitude of migration in China have stimulated increasing research efforts in recent years. Students of migration in China have focused on broader patterns and trends in migration, gender and consequences of migration, the well being of migrant children, hukou status and social stratification, and the reproductive health of migrant women (Fan, 2004; Liang, 2001; Roberts, 2002; Feng et al. 2002; Wu and Treiman, 2007). Despite being an integral component of the migration process, return migration in China has received relatively scant attention (see some recent notable exceptions – Bai and Song, 2002; Ma, 2001; Zhao, 2001).

It is important to study return migration for several key reasons. First, the nature of return migration has important implications for the subsequent study of migrant adaptation in the host destination. If, for example, the return migrants are positively selected on socioeconomic characteristics, the current literature on migrant adaptation at the place of destination may be biased in terms of underestimating the effect of assimilation. Second, previous studies of return migration suggest that in other countries, it may account for upwards of one third of the migrant flow (Warren and Kraly, 1985). If China follows a similar pattern of return migration, it will become an important factor in determining the net flow and overall patterns of migration. In this sense, a clear understanding of the magnitude of return migration in and of itself is of great significance. Third, return migration is also important because return migrants bring back the remittances (i.e., financial capital) in addition to human capital in the form of acquired skills and work experience, factors that are crucial for economic development in the place of origin. This is particularly relevant in recent years as global financial crisis has reduced demand for Chinese goods and many migrants in coastal areas return to their home villages (Han, 2009).

This paper applies an innovative approach to studying the phenomenon of return migration in China. Relying on data from the 1995 China 1% Population Sample Survey, we developed a method of identifying return migrants and distinguishing them from active migrants (i.e., migrants who are still at their host destination). The first goal of this paper is to examine and compare the characteristics of return and active migrants. We will then model the determinants of return migration taking both individual level and contextual level characteristics (i.e. unemployment and migration networks) into account. Finally, we will model occupational choices for return migrants and compare those with non-migrants at the place of migrant origin, i.e., their home province. In particular, we will examine the extent to which return migrants are more likely to be engaged in non-farm employment once they return. Implications of our findings are discussed at the end of the paper.

Return Migration Selectivity and Individual Level Factors

Return migration has been studied both in the context of international and internal migration. In the arena of international migration, researchers are often interested in the extent and selectivity of return migration for methodological as well as substantive reasons (Cohen and Haberfeld, 2001; and Jasso and Rosenzweig, 1990). It is argued that the nature of selectivity of return migration has strong implications for immigrant assimilation. If, for example, return migrants are negatively selected, the study of immigrant assimilation using data that contain only immigrants who remain in the countries of destination will show progress of immigrant assimilation, even if there is no assimilation (Cohen and Haberfeld, 2001). In contrast, if return migrants are positively selected, studies that use data that contain only remaining immigrants are likely to underestimate the level of assimilation for immigrants. Although immigration scholars

are cognizant of this problem, few studies to date have provided satisfactory answers. Moreover, students of internal migration in China have not paid sufficient attention to this issue. Studies of economic performance of migrants are often conducted with data collected at migrant destinations. Typical studies find that migrants are not doing as well as the local workers in terms of earnings and occupational attainment (Feng et al., 2002; Yang and Guo, 1999). Notwithstanding, it should be noted that these results may, in fact, be biased depending on the nature of return migration in China.

In a paper that focused on return migration of the foreign-born in the United States, Borjas and Bratsberg (1996) argued theoretically that return migration tends to attenuate socioeconomic selectivity of migration. To this end, if migrants are positively selected, then return migrants tend to be the worst of the best; if they are negatively selected, the reverse would be true and return migrants would be the best of the worst. In the context of migration in China, since the current literature suggests that migration is positively selected, i.e., more educated people are more likely to migrate, the work of Borjas and Bratsberg (1996) would lead us to hypothesize that return migration is likely to be negatively selected on socioeconomic characteristics.

Economic and Social Contexts of Return Migration

The above discussion highlights some of the most important individual level factors that are associated with return migration. However, return migration is also affected by economic and social factors in places of destinations. Brown and Goetz (1987) and Findley (1987) have shown impact of development-related contextual level factors on migration in less developed countries. Likewise, in developed countries contextual variables both at state and metropolitan

levels have also been shown to affect migration patterns in the U.S. (South and Crowder, 1997; Tolnay and Crowder, 1999).

Of course these contextual level factors take on a new meaning in China of the 1990s for which much of this paper is concerned. After successful rural reforms in the late 1980s, China in the 1990s embarked on urban reforms, especially the reform of state owned enterprises (SOE). Many state owned enterprises are not competitive and even lose money (Giles et al., 2006). According to Lardy (1998), 16% of the SOEs lost money in 1989 and by 1993 the percentage rose to 30.3%. As an effort to increase efficiency, many SOE workers were laid off (or *xiagang)*. Some estimates put the number of unemployed workers (from SOEs) at about 40 millions (half of the reported number of SOE workers) (Solinger, 2002). Such high level of urban unemployment provides a poor prospect for employment of migrant workers in urban China. Thus we expect that migrants in locations of high level of unemployment will exhibit high propensity to return. In an earlier study on return migration, Bai and Song (2002) interviewed return migrants whose hometowns were in Sichuan and Anhui provinces. Among the return migrants in the three time periods they studied, a very high proportion of them cited "difficulty of employment" as the reason for return migration (48% for return migrants during 1980-1995, 57% for return migrants during 1996-1997, and 62.7% during 1998-1999). The increasing concern of employment among return migrants is consistent with large numbers of laid-off workers in the 1990s.

We also note that poor economic conditions in the destination areas do not affect every migrant to the same degree. Recent studies on unemployment suggest that "individuals at the lower end of the job queues have the greatest chance of unemployment (Wolbers, 2000, p. 187)." In this respect, migrant workers are more likely to be subject to similar labor market conditions

as the individuals at the lower end of the job hierarchy. Therefore, we expect that in an economic environment that is characterized by high level unemployment, migrant workers with less education tend to face potential competition from laid-off workers from SOEs, and are thus less likely to be successful in finding a job and more likely to return home.

Another important factor is the migration networks formed in the destination places. As defined by Massey (1999), "migration networks are sets of interpersonal ties that connect migrants, former migrants, and non-migrants in origin and destination areas through ties of kinship, friendship, and community of origin (p.44)." They increase the probability of migration because they lower the costs of migration and increase the returns to migration. Migration networks are thought to ease the process of settlement for migrants in terms of providing information on practical matters such as housing, employment, children's education choices, or choices for health care. Perhaps the most telling examples of migration-network based employment are found in Chinatown in North America in the context of international migration and in Beijing's Zhejiang Village in case of internal migration in China. This logic leads us to hypothesize that those migrants who live in areas with well established migration networks are more likely to stay in the destination and less likely to return. In the context of internal migration in Thailand, Korinek, Entwisle, and Jampaklay (2005) examined factors that lead to different migration trajectories such as settlement, return migration, and onward migration to new destinations. They argued that "the more embedded migrants' social relations become in an urban destination, the more likely migrants are to consolidate their settlement and become transformed from sojourners to more permanent urban dwellers (p.780)." Using longitudinal data collected in the Nang Rong district in Northeast Thailand, Korineck et al. (2005) demonstrated that urban-integrated migrants with diverse ties in the urban destination who reside

in co-villager enclaves and households that promote social adaptation and incorporation are more likely to settle as compared to other less integrated migrants.

Studies on Return Migration in China

Notwithstanding, the study of return migration in China is still in the early stages. This is, in part, because a major increase in migration has only occurred during the last two decades or so, and most analysts understandably focus their attention on the causes and consequences of migration (Goodkind and West, 2002; Liang, 2001; Roberts, 2002; Feng et al., 2002; West and Zhao, 2000). In a series of papers, Ma (2001) made strong statements about the important role played by return migrants in China's rural transformation. Using a 1997 survey of return migrants in nine Chinese provinces, Ma's (2001) findings suggested that one of the reasons migrants return home is to take advantage of local social capital to engage in entrepreneurial activities**.** Ma's work further revealed that return migrants may actually act as catalysts for rural development. Using household survey data from migrant-sending areas in China, Zhao (2001) analyzed the determinants and consequences of return migration. One of Zhao's main findings is that return migration is mainly motivated by prolonged separation from families and the ensuing desire to reunite, rather than failure at landing a well-paying job. Somewhat surprisingly, Zhao (2001) also showed that return migrants and non-migrants at the origin places have equal chances of engaging in non-farm work once relevant characteristics are taken into account, including but not limited to factors like education. Consistent with Zhao's finding, recent study of return migration by Wang and Fan (2006) underscored family demand as an important reason for return migration. Wang and Fan (2006) also showed that return migrants are negatively selected among migrants.

Although the pioneering works discussed above provide invaluable insights into the causes and consequences of migration, there are still significant gaps in the literature, particularly in terms of return migration in China. It should be noted that both Ma and Zhao relied on surveys conducted at the places of migrant origins. Their research approach is carefully designed for their specific purposes. However, these data are not entirely satisfactory for estimating the magnitude and probability of return migration in China, nor for conducting a comparative analysis of return vs. active migrants. In addition, Zhao's (2001) sample size (824 households) is not particularly large, thus limiting the ability to make generalizations and extrapolate the findings to other provinces and/or situations.

There is another line of research that examines the occupational choices when migrants return home. Murphy (2000) and Ma (2001) strongly argue the return migrants are catalysts for rural entrepreneurship and development. Here we are interested in examining the extent to which return migrants participate in non-farm employment. Non-farm employment has been a central concern of recent scholarship on rural China (Guang and Zheng, 2005; Parish et al., 1995). The transformation from farm work to non-farm work characterizes the urbanization process across all societies. China is no exception. We expect that return migrants are more likely than non-migrants to be involved in non-farm employment for two major reasons. One is that most migrants work on non-farm jobs (i.e. factory work and small businesses in cities) while in migrant destinations. These experiences are likely to enhance the prospect for non-farm work once they return which allows them to use some of their learned skills and enjoy favorable earnings compared to farming. Second, return migrants often accumulate financial capital while working in the cities, which increases their chances of participating in entrepreneurial activities instead of focusing on traditional farming once they return.

In this paper, we endeavor to contribute to the literature on return migration in several aspects. First, to take advantage of several special features of the 1995 China 1% Population Sample Survey, we measure the magnitude of return migration using data from both migrant origin and destination. To do so, we use the concepts of "return migration" and "active migration" to identify two types of migrants: (1) to the place of origin (for return migrants) and (2) to the place of destination (for active migrants). Thus, we will be able to measure the extent of return migration and conduct comparisons of characteristics of return and active migrants. Second, unlike other studies which focus on lifetime return migration (Luis and Liu 1998*;* also see Zhou and Hou (1999) for a study of return migration during the Cultural Revolution), our paper focuses more on return migration within a relatively short period of time (5 years). While this five-year period is long enough to observe return migration, it is also short enough to use individual-level characteristics at the time of survey to predict return migration behavior.

Third, perhaps most importantly, we examine the role of economic circumstances in destinations as well as migration networks on migrants' propensity to return. Our attention to the economic context of destination is particularly noteworthy because of the ramifications of the recent global financial crisis and shortage of migrant laborers in coastal China (Chen and Zhao, 2007; Oster, 2008). Another advantage of our approach is that to our knowledge this is the first time a nationally-representative sample with a relatively large sample size is used in the study of return migration and we are therefore in a better position to make generalizations about return migration behavior and potentially predict future patterns.

Data

One of the reasons for the current lack of studies on return migration in China is the nature of most migration surveys. Since the 1980s, there have been several surveys of migration in China. Some of the most well known surveys are the 1994, 1997, and 2005 Migrant Surveys in Shanghai, and the 1994, 1997, and 2005 Surveys of Floating Migrant Population in Beijing. Because these migration surveys focus exclusively on the destination areas, they tell us nothing about return migration behavior with the exception that some surveys ask questions about the intention to return or stay. By the same token, surveys of return migrants conducted at the places of origins have limitations as well, since they do not compare return migrants with those migrants who are still active, i.e., in their host destinations. Our research design allows us to compare return migrants with migrants who stay in the destinations and people who do not migrate.

The data for this paper come from a sample of the 1995 China 1% Population Sample Survey conducted on October 1, 1995 (CPSSO, 1997). The 1995 China 1% Population Sample Survey is designed as a mini-census to be conducted between the 1990 and the 2000 censuses. The survey contains basic socio-demographic characteristics of household members including age, sex, education, occupation, and housing conditions; but unlike the 1990 Chinese Census, the 1995 survey also contains several important questions on migration. Aside from the standard question regarding "province of residence five years ago", questions about the year and month of arrival to the current location and about the province of previous residence are also asked. For the first time, the information on month of migration allows us to capture seasonal variation in return migration using nationally representative data. Moreover, what's important to the current study is the question regarding the province of previous residence for people who moved to the current location sometime between 1990 and 1995. This particular question provides us with

much more important information than the standard question pertaining to respondents' province of residence five years before the survey/census. For example, if someone moved to Shanghai in 1993, then we can find out about the province of her/his previous residence prior to the migration to Shanghai. Indeed, this is crucial for us to accurately identify return migration, which we will discuss in greater detail in the Methods section. Some may wonder whether the 2000 Chinese Census data may be a more appropriate source than the 1995 China 1% Sample data to study return migration. The micro-data sample released from the 2000 Chinese Census is 1/1000 of the original census data. This may be good enough for other research purposes. However, return migration is relatively low in China, so the micro-level data from the 2000 Census do not capture as many return migrants as in the 1995 China 1/100 Population Sample Survey data.

Nevertheless, there are some limitations with the 1995 survey data. For example, it is possible that migrants have returned to the province of origin more than once, but we observe only the most recent return migration. Similarly, among return migrants, while we know the exact month and year of their return migration, we do not know the exact timing of their initial departure from their province of origin. Thus, we only know that they migrated at some point between 1990 and the time of their return. This implies that we cannot precisely measure the duration of residence at the host destination for return migrants. Finally, the data allow us to identify return migrants only if they returned during the period between 1990 and 1995. We acknowledge that this may not be ideal from the perspective of understanding long-term patterns of return migration, but this potential limitation should be viewed in conjunction with the benefit of this strategy, i.e. we are able to link return migration with contextual level (provincial level) variables. In this case, measuring return migration in a relatively short interval of 5 years is likely to capture contextual level impact on return migration.

Methods

Scholars have studied return migration in different contexts over the course of at least three decades (Goldstein, 1964; Lindstrom, 1996; Long and Hansen, 1975). Methodologically, previous studies can be roughly classified into the following categories. The first approach encompasses a census-based analysis, which has led to several well-known studies including that of return migration to the U.S. "South" (Lee 1974; Long and Hansen, 1975). This approach is based on three questions readily available in the United States Census at that time: (1) place of birth; (2) place of residence five years prior to the census; and (3) the place of residence at the time of census. This type of exercise generally employs the "state" as the geographic unit. For example, if someone was born in the state of Alabama, lived in the state of New York five year before census, and lived in the state of Alabama at the time of census, then this person was a return migrant to the South. The main advantage of this approach is that the census data allow researchers to provide the most systematic description of lifetime return migration. The major disadvantage is that both the exact timing of migration and the timing of return migration cannot be pinpointed, except that we know these events happened within broad intervals. Therefore, it is difficult to link migration/return migration behavior with the larger context.

The second approach is based on longitudinal data sets or within the framework of event history data (DaVanzo, 1981; Lindstrom, 1996). In the case of longitudinal data, the Panel Study of Income Dynamics recorded respondents' area of residence annually, thus allowing analysts to study different types of migration: i.e., primary move, short-interval return move, origin return move, and onward move (DaVanzo, 1981). Although longitudinal data can

provide very rich and varied types of information, they are less than ideal for the examination of patterns of return migration behavior for a whole country.

In this paper, we employ a method that enables us to obtain information on return migrants as well as active migrants (i.e. migrants who are still at their host destinations). This method relies on several questions that were asked in the 1995 survey: place of residence in 1990, place of residence in 1995 (i.e., the survey date), and previous place of residence for individuals who moved during 1990-1995. We use Sichuan province as our case study because it is one of the major migrant-sending provinces in China (see Figure 1 for location of Sichuan province) and it is also one of China's most populous provinces.

We measure return migration as described in Figure 2. For example, person X was residing in Sichuan province in 1990, and sometime between 1990 and 1995 person X moved to Guangdong province, and then before the survey was conducted in 1995 person X returned to Sichuan. A unique feature of the 1995 survey is that it contains information on migrants' most recent province of residence besides their residences in 1990 and 1995. It is through this set of questions that we are able to capture return migrants. For example, if we know person X resided in Sichuan in 1990 and 1995, and we also know that Guangdong (in this case) was her/his province of previous residence during 1990-1995, then we can define person X as a return migrant. We should note that to be counted as return migrants the migrants have to have stayed in the hometown for a minimum of six months. We expect this will exclude those migrants who came home briefly because of a family emergency or migrants who came home to take care of a medical condition.

In order to compare the characteristics of return vs. active migrants, we also need to find a way to measure active migration. For example, in order to find active migrants from Sichuan

who were in Guangdong province at the time of survey (1995), we take advantage of the Guangdong portion of the 1995 China 1% Sample Survey. On the right side of Figure 2 we identify interprovincial migrants who were from Sichuan province and were still residing in Guangdong in 1995.

Our analysis began with construction of two data sets. The first data set consists of active migrants from Sichuan who were residing in other provinces at the time of the survey. To do this, for each province other than Sichuan (Guangdong, Zhejiang or any other province) we identify all migrants from Sichuan who were living in that province, take their relevant characteristics (such as age, sex, and education) and merge similar files for all provinces. The second data set, generated from the Sichuan portion of the 1995 survey, consists of interprovincial return migrants along with non-migrants in Sichuan. The final merged data set includes three groups of individuals: interprovincial return migrants to Sichuan, active interprovincial migrants from Sichuan who were residing in other provinces in 1995, and non-migrants in Sichuan.

The empirical analysis is comprised of several components. First, we compare the basic socio-demographic characteristics of return migrants (from Guangdong or other provinces back to Sichuan) and active migrants. The basic characteristics include: sex, age, education, marital status, occupation, labor force participation status, and weekly hours worked per week. The second part of our data analysis is to estimate statistical models of return migration using individual level variables only. The last part is to estimate models predicting return migrants and non-migrants' participation in non-farm work in Sichuan.

To take into account both individual and province-level characteristics at destination we use multilevel modeling methodology (Raudenbush and Bryk, 2002). Multilevel models can

appropriately estimate standard errors for parameters when individuals are clustered within a larger unit/context. Two major variables of our interest are unemployment rate in destination province and migration networks for Sichuan migrants. We measure urban unemployment rate for each province using data from the 1995 China 1% Population Sample Survey. In addition, for each province we created a migration network variable: the proportion of Sichuan migrants out of the total population in a province of destination using migration information from the 1990 China Population Census.

The decision to measure migration networks at the province level is based on practical as well as substantive reasons. Given the fact that return migration is still not very prevalent, if we tabulate return migrants by county we will end up with too many empty cells. We also argue that using province as the basis for forming migration networks makes sociological sense for the following reasons. First is the issue of language. Although there are variations in dialects for people from the same province, in most cases, people from the same provinces speak dialects that are usually intelligible. Similar language ensures a strong sense of province-based identity and thus province-based migration networks at the destination. Second, at the destination province, locals usually associate migrants with their province of origin. In Beijing, for example, local police often use the term "zhe pi zi," which literally means folks from Zhejiang Province, to identify migrants from Zhejiang Province. Partly due to the similar accent spoken by people from Northeast China, which covers three provinces, they are usually identified as "dong bei ren" (Northeasterners). This perception by local residents further reinforces the province or region-based identities.[1] Third, the province-based identity and migration networks are clearly

[1] This is similar to the case of Chinese immigration to the United States. Chinese who are from Hong Kong, Taiwan, or the Mainland may have a different sense of identity. Since most Americans do not know the distinction and simply identify them as Chinese, this ethnic distinction gradually diminishes once immigrants arrive in the United States.

seen in the migrant enclaves in Beijing such as the well-known Zhejiang Village – a concentration of migrants from Zhejiang Province (Ma and Xiang 1998), Henan Village, and Xinjiang Village (which has been dismantled subsequently). Finally, using contextual level variables at the province level has major advantage for our unemployment measure because unban unemployment at the provincial level captures more variations in economic conditions across provinces and is more meaningful and policy-relevant.

Two measurement issues should be mentioned here: age at migration and duration of residence in migrant host destinations. For active migrants, age at migration is the age at which they arrived at the migrant host destination, derived from information on the year of migration. For return migrants, it was imputed as the age of return to Sichuan province minus the duration of residence at migrant destination. Regarding duration of residence, our strategy is the following. For active migrants, duration of residence is year 1995 minus the year of migration. For return migrants, we need to first estimate the year of out-migration (this is not the year of return migration), which is estimated as the average of 1990 and the year of return migration, - given the limited information we have, this is the best we can do to estimate the year of out-migration for return migrants. Then for return migrants, the duration of residence in destination is the difference between the year of return migration and the year of out-migration from Sichuan province.

Results

Table 1 summarizes the basic socio-demographic information for three groups: return migrants, active migrants, and non-migrants. We focus on those individuals who are between the ages of 15 and 59, i.e., those who are of labor force participation age. The first question we endeavor to answer concerns the actual magnitude of return migration. Table 1 shows that return

migrants account for roughly 10% of the total interprovincial migrant flow originating from Sichuan province during the period of 1990-1995. Since Guangdong province is considered the "province of migration" in China, and has the largest migrant flow from Sichuan province, we also calculated the rate of return migration from Guangdong province to Sichuan province, which was about 28% during the period between 1990 and1995 (not shown in Table 1). The difference between the rate of return migration from Guangdong and that from other provinces to Sichuan is worth noting. We argue that migration has to sustain a period of time before a significant pattern of return migration can be observed. Since the flow of migration from Sichuan to Guangdong started much earlier than migration from Sichuan to other places,[2] the rate of return from Guangdong was much higher than that from other provinces at the time this survey was conducted.

Overall, return migration rate as identified in this data does not appear as high as the findings from other studies on China. For instance, based on data from 824 households in six provinces, the return migration rate in 1999 was about 38% (Zhao, 2001). [3] One possible explanation for this difference is that the late 1990s was a time when urban unemployment rate increased significantly because state-owned enterprises were forced to lay-off a large number of workers. If this is the case, we expect to see a major increase in return migration when we look at more recent data such as the 2000 Chinese Population Census, not only in Guangdong but in other provinces as well.

Most migration studies report comparisons of socio-demographic characteristics between migrants and non-migrants. In this paper, we are in a position to compare these characteristics

[2] For example, even in the 1990 census, the migrant volume from Sichuan to Guangdong is much larger than migrant volume from Sichuan to any other province (NBS, 1991).
[3] It should be noted that to be counted as a return migrant in Zhao's study, an individual had to have stayed in the home province for at least 8 months.

of return and active migrants, as well as non-migrants in Sichuan. Table 1 shows that nearly 70% of return migrants are male as compared to only 52% for active migrants. The gender differential in return migration is quite striking. Moreover, return migrants on average are older than active migrants, lending support to the underlying negative socioeconomic selectivity of return migration. Older migrants are also likely to have family obligations which motivate them to return. Return migrants appear to have lower levels of education when compared to active migrants. Nearly 50% of return migrants have an education level of elementary school or below compared to 38% of active migrants in the same education category. The percentage of active migrants who have achieved an education of senior high school or above is also higher than that of return migrants. This finding is consistent with the argument by Borjas and Bratberg (1996) in the context of international migration. In addition, 69% of return migrants are married compared to 63% among active migrants, pointing to family reunion as a possible reason for return migration. We also note that active migrants have the longest working hours per week, a finding consistent with other studies that documented difficult working conditions and long working hours for migrant workers.

Another objective of this paper is to evaluate the extent to which return migrants are engaged in non-farm work upon arrival back in their home province. The descriptive results seem to suggest that there is actually a higher proportion of return migrants participating in agricultural work when compared to non-migrants in Sichuan. This is in contradiction with what we expected, but this is rather tentative because we have not controlled for other factors yet.

The 1995 China 1% Population Survey contains information on the month of migration which facilitates the examination of the timing of return migration, in particular the month of return migration among individuals who returned during the 1990-1995 timeframe. Figure 3

shows the timing of return migration by month, revealing two main patterns. First, nearly one-quarter of all return migrants came back during the months of December and January, a time which coincides with the Western New Year, and perhaps more importantly just prior to the Chinese New Year. Another one-fourth of these migrants returned during the months of August and September, the typical months for harvest in Sichuan province. Thus, the actual timing of return migration has a clear seasonal component.

The results from the logistic regression models of return migration are reported in Table 2. Our sample includes both active interprovincial migrants in other provinces and interprovincial return migrants to Sichuan. We estimated three models. The first model contains demographic characteristics, the second model adds duration of residence, and the third model includes a variable indicating whether the destination is a rural or urban area. While male migrants are more likely to return than female migrants, those migrants that are married are more likely to return. In other studies, a frequently used variable is whether the spouse accompanied the migrant on the trip (Massey et al., 1987). Unfortunately, this survey did not collect this information.

Regarding the effect of age at migration, the results show that the older the individuals were when the initial outmigration occurred, the less likely it is that they were going to return. This is because migrants who migrate at older ages tend to make more informed decisions that minimize the chances of mismatch between jobs and skills, thus increasing the likelihood of staying at their destinations. In addition, our results also show that, unlike most other studies, the longer the migrants stayed at the destinations, the more likely they were to return. This result is somewhat tentative given our imperfect measurement of the duration of residence in destination. In addition, our measurement of return migration captures only return migration during the

period of 1990-1995. It is possible that our relatively short interval of observation does not allow us to fully estimate the impact of duration of residence on return migration. However, our interviews with some return migrants in Sichuan give us some insights about this. During our fieldwork in Sichuan province, return migrants often talk about their experience in this way: in the first few years of migration, they cannot return because they have not made enough money. Only when they make a significant amount of money can they think about returning. Our results are consistent with this insight.

If we measure education by years of schooling, then the effect of education on return migration is negative, i.e. more years of schooling leads to lower propensity to return. This is consistent with earlier studies on negative education selection for return migrants in general. We have also tested models using different categories of education (results not shown here). It turned out migrants with elementary school education are more likely to return than migrants with no education. This is probably because the return to basic education is higher in Sichuan than other places. But migrants with senior high school education appear less likely to return to their province of origin, suggesting that the return to senior high school level of education is probably higher in the host destinations (usually cities) than in the migrant's home province (usually rural areas). Finally, migrants who live in urban areas are more likely to return compared to migrants who live in rural areas. This is in part caused by difficulties of obtaining *hukou* in urban areas. The lack of *hukou* at destination creates a strong sense of uncertainty and insecurity which makes the migrants more likely to return.

Results from multilevel models of return migration are presented in Table 3. We focus on model B which contains an interaction term between education and unemployment rate. The most important contextual level variable at the provincial level is urban unemployment rate.

Consistent with our expectations, the higher the urban unemployment rate, the more likely the migrants are to return home. The results also reveal that unemployment has a bigger impact on less educated migrants than well educated migrants: less educated migrants in high unemployment locations are more likely to return. It is likely that when unemployment is high the less educated are more likely to be laid off first and then return home. Migrants who live in places with a large presence of Sichuan origin migrants are less likely to return. This is consistent with previous studies showing that migration networks help migrants' settlement process in destination areas (Korinek et al., 2005). We also tested models of return migration with geographic distance from origin to destination, but the distance variable did not have a statistically significant effect and so has been excluded from the final model.

Table 4 shows results from logit model of engaging in non-farm work. In this case, our sample contains both return migrants and non-migrants in Sichuan. Not surprisingly, men are more likely to be engaged in non-farm employment. Educated individuals are also more likely to be employed in non-agricultural occupations. The larger the number of out-migrants in the household, the less likely individuals are involved in non-farm employment. It is reasonable to assume that in households with out-migrants there is a big demand to take care of the land. This is related to the Chinese government policy that peasants must farm their assigned land even if there are some household members who migrated. It is also very obvious that people in urban areas are much more likely to have non-agricultural occupations. The coefficient that we are interested in most is the coefficient for return migrants. Recall that our hypothesis is that return migrants are more likely to be in non-farm employment. Although the coefficient is in the right direction, it is not statistically significant. In other words, return migrants are not more likely to be engaged in non-farm employment than non-migrants.

Summary and Conclusion

Return migration is an important part of the migration process that deserves careful empirical scrutiny. Using data from the 1995 China 1% Population Survey, this paper provides some benchmark measures of return migration in China. Because the survey data cover both migrant origin and destination, we are able to capture both interprovincial return migrants and interprovincial migrants who have remained in their host destinations. Notwithstanding the constraints of our data, we would like to highlight the following findings. Our results show that the rate of return migration depends on the province of destination and can be quite high in some cases. For example, nearly 30% of the interprovincial migrants from Sichuan to Guangdong province have returned to Sichuan. The rate of return migration from other provinces to Sichuan is about 10%. Such an estimate of return migration for China as a whole is in itself highly significant. If we estimate the middle range of the rate of return migration as approximately 20% and apply that to China's inter-county floating population of 80 million for the year 2000, that would yield about 16 million return migrants overall. Indeed, this is a significant volume of migrant flow that will undoubtedly exert a major impact on migrant-sending areas. In some way, this flow indicates that migration in China may have entered a new phase, i.e., a stage at which migrants are ready to make significant contributions to the economic development of migrant-sending areas.

Return migration also shows distinct patterns of socio-demographic selectivity. In general, older and married migrants are more likely to return than those that are younger and/or single. Moreover, individuals who migrated at older ages are also less likely to return. Perhaps the most interesting pattern of migration selectivity is the fact that education does not have a

uniform effect on return migration. Compared with illiterate migrants with little or no education, migrants with senior high school levels of education are less likely to return; however, migrants with elementary school level of education are more likely to return. It is possible that migrants with elementary school level of education find their education is best appreciated in migrant-sending areas, often in the countryside, but not so much in the migrant destination provinces. This lends hope that if economic conditions improve and education is rewarded accordingly, well-educated migrants' propensity to return is likely to increase. This finding is significant especially if we interpret it in light of our model of non-farm employment which revealed that education is the most important determinant of non-farm employment, with the most consistent effect on increasing participation in non-farm employment (see Table 4).

As discussed in an earlier part of this paper, migrant selectivity has important implications for current studies of migrant adaptation in cities. It should be noted that most studies of migrants' labor market performance in China have not taken into account the fact that their studies may be subject to certain biases due to return migration. The reasoning is that if return migrants are better educated than active migrants, our studies of migrant adaptation (as measured by wages and occupational achievement) tend to understate migrant performance in the labor market. In contrast, if return migrants are not as well educated as the active migrants, analysis that uses only the active migrant sample may overstate migrants' achievement in the labor market. Our descriptive results show that in general return migrants are not as well educated as active migrants. In other words, migrants with higher levels of education tend to stay in their host destinations where their educational achievement is most likely to be rewarded. What this implies is that if return migrants did not return, extant research would have shown an even worse picture of migrants' labor market performance as compared to local, non-migrant

individuals. On another methodological note, our paper also raises hope for systematic studies of return migration in other countries. Essentially the simple and intuitive methodology we developed does not require very complex data collection and allows researchers to study return migration in countries which do not have the resources to collection systematic migration data.

Our study is among the first to measure the impact of contextual level factors on return migration behavior. In particular, we have shown that return migration behavior is very sensitive to unemployment conditions in the destination area. In light of our results, the recent increase in return migration from coastal China should not come as a surprise. Many factories in coastal China are closed because of reduced product and labor demand at the time of global financial crisis and because of the financial cost burden for factory owners to implement China's labor laws. We suggest the consideration of contextual factors is not only important for studying return migration in China but also important for studying international return migration. The recent global financial crisis creates a unique opportunity to study international return migration because major migrant-receiving countries are all affected to a significant degree. We also show that less educated migrants are particularly responsive to unemployment situation in destinations. Another way to look at this issue is that in order to keep a steady job in a migrant destination, it is important to have a good education.

The sheer magnitude of the return migrant population also has strong policy implications for rural development and urbanization in China. In recent years, a new migration-related terminology called "migrant economy" (*dagong jingji*) has gained popularity (Chen, 1997). Chen (1997) reported that by the end of 1997 there were approximately 340,000 migrants that had returned to Sichuan. In many provinces, return migrants brought back with them both financial and human capital, in the form of remittances and skills acquired while in the cities.

Some migrants were able to engage in entrepreneurial exercises starting businesses in apparel, furniture, electronics, construction, and food processing just to name a few. In Sichuan province alone, by 1997 these enterprises employed as many as 750,000 surplus laborers in the countryside (Chen, 1997). Our recent fieldwork in rural Sichuan province reveals that even before the global financial crisis, many rural governments have developed policies to encourage return migration and especially return migrant entrepreneurs. In Jintang county (about 40 miles from Chengdu, the capital city of Sichuan province), the local government plans to build a center of shoe-making industry in southwest China. The local government has allocated a big piece of land for entrepreneurs to set up shoe-making factories. As return migrants become entrepreneurs, they can provide employment opportunities for local peasants as well as other return migrants. They also give other migrants an opportunity to engage in non-farm work and yet simultaneously take care of their family members (elderly and children). This shift in China's labor market supply also has strong implications for the world economy because China's migrant laborers have been sustaining the operation of the so called "world factory". These patterns of Chinese migration (including return migration) will affect the fortunes of these factories and their investors in the age of globalization. These new developments related to return migration in China deserve researchers' careful attention in future research.

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Table 1. Descriptive Characteristics of Return Migrants in Sichuan, Active Sichuan Migrants in Other Provinces, and Non-migrants in Sichuan

Variables	Return Migrants	Active Migrants	Non-Migrants
Sex Ratios (%)			
Male	68.96	52.97	49.96
Female	31.04	47.03	50.04
Mean Age (in years)	28.18	27.69	39.97
Ratio of labor force aged people (%)	98.91	97.46	82.26
Marital status (%)			
Unmarried	29.95	35.72	16.21
Married, spouse present	69.08	62.82	76.70
Divorced or widowed	0.98	1.45	7.67
Education			
No formal education	2.30	4.41	16.87
Literate	0.11	0.52	2.40
Elementary school	46.89	32.99	42.93
Junior middle school	43.28	48.40	28.80
Senior high school	6.67	9.03	7.42
Junior college or above	0.77	4.67	1.57
Average years of schooling	7.62	8.12	6.32
Relationship with household head (%)			
Head	39.89	21.45	39.35
Spouse	13.44	22.90	30.33
Parents, grandparents, and great-grandparents	0.55	1.99	6.19
Children	37.60	2.68	18.80
Children-in-law	6.34	5.83	3.69
Grand children	0.22	0.12	6.33
Sibling	1.42	2.54	0.83
Others	0.55	42.48	0.46
Rural /Urban Status (%)			
Rural	89.62	41.44	73.20
Urban	10.38	58.56	26.80
Occupation of the Employed (%)			
Professionals	0.57	3.50	3.69
Government officials	0.46	1.40	1.14
Office workers	0.34	2.66	1.29
Commerce	1.37	6.94	3.29
Service	0.91	9.77	1.98
Agriculture	84.82	23.96	79.79
Manufacturing, transportation	3.08	19.45	2.73
Others	8.45	32.33	6.09
Average work hours per week among the employed	42.33	49.33	41.65
N	**915**	**8531**	**258165**

Table 2. Logit Model of Determinants of Sichuan Migrants Returning to Sichuan

	Model A		Model B		Model C	
Independent Variables	**B**	***SE***	**B**	***SE***	**B**	***SE***
Intercept	-1.5260 **	0.1783	-1.7063 **	0.1887	-1.7532 **	0.1900
Male	0.9248 **	0.0793	0. 9494 **	0.0800	0.9390 **	0.0800
Ever married	0.5875 **	0.0839	0.5463 **	0.0850	0.5612 **	0.0853
Years of schooling	-0.0960 **	0.0133	-0.0958 **	0.0132	-0.1010 **	0.0134
Age at migration	-0.0351 **	0.0052	-0.0335 **	0.0051	-0.0343 **	0.0051
Months of staying in destination	----	----	0.0066 **	0.0023	0.0071 **	0.0024
Residing in urban area	----	----	----	----	0.1562 *	0.0744
-2 Log Likelihood	5803.411		5795.600		5791.161	
Chi-Square	206.9404 **		214.7513 **		219.1910 **	
df	4		5		6	
Number of cases	9446		9446		9446	

Note: † P < 0.10, * P < 0.05, ** P < 0.01

Table 3. Multilevel Models Predicting Return Migration to Sichuan

	Model A		Model B	
Independent Variables	**B**	***SE***	**B**	***SE***
Intercept	-5.9323 **	1.4225	-6.7953 **	1.4697
Individual Characteristics				
Male	1.0791 **	0.0837	1.0766 **	0.0837
Ever married	0.5865 **	0.0882	0.5877 **	0.0883
Years of schooling	-0.1163 **	0.0148	-0.0061	0.0441
Age at migration	-0.0251 **	0.0054	-0.0246 **	0.0054
Months of staying in destination	0.0141 **	0.0026	0.0142 **	0.0026
Residing in urban area	0.0704	0.0818	0.0661	0.0817
Provincial Characteristics				
Migration networks	-121.84 *	59.6485	-123.11 *	60.0835
Logged per capita industrial output value	0.4173 **	0.1552	0.4165 **	0.1563
Urban unemployment rate	4.7228	6.5947	19.9756 *	8. 6940
Interaction Term				
Years of schooling X urban unemployment rate in destination province	----	----	-1.9410 **	0.7307
-2 Res Log Pseudo-Likelihood	53858.34		53981.28	
Generalized Chi-Square	9216.63		9304.94	
Gener. Chi-Square /DF	0.98		0.99	
Number of cases	9446		9446	

Note: † P < 0.10, * P < 0.05, ** P < 0.01

Table 4. Logit Model of Determinants of Doing Non-farm Work in Sichuan

	Model A			Model B		
Independent Variables	**B**		***SE***	**B**		***SE***
Intercept	-6.019	**	0.041	-6.019	**	0.041
Male	0.363	**	0.015	0.363	**	0.015
Age	0.018	**	0.001	0.018	**	0.001
Ever married	- 0.094	**	0.020	- 0.094	**	0.020
Years of schooling	0.399	**	0.003	0.399	**	0.003
No. of migrants in household	- 0.352	**	0.015	- 0.352	**	0.015
Return migrant	0.090		0.109	0.126		0.117
Urban area	2.330	**	0.014	2.331	**	0.014
Return migrant X urban area	----		----	- 0.239		0.300
-2 Log Likelihood	134377.3			134376.7		
Chi-Square	74467.77	**		74468.39	**	
df	7			8		
Number of cases	206558			206558		

Note: † P < 0.10, * P < 0.05, ** P < 0.01

Figure 1. Map of Sichuan Province

Figure 2. Measuring Return and Active Migration

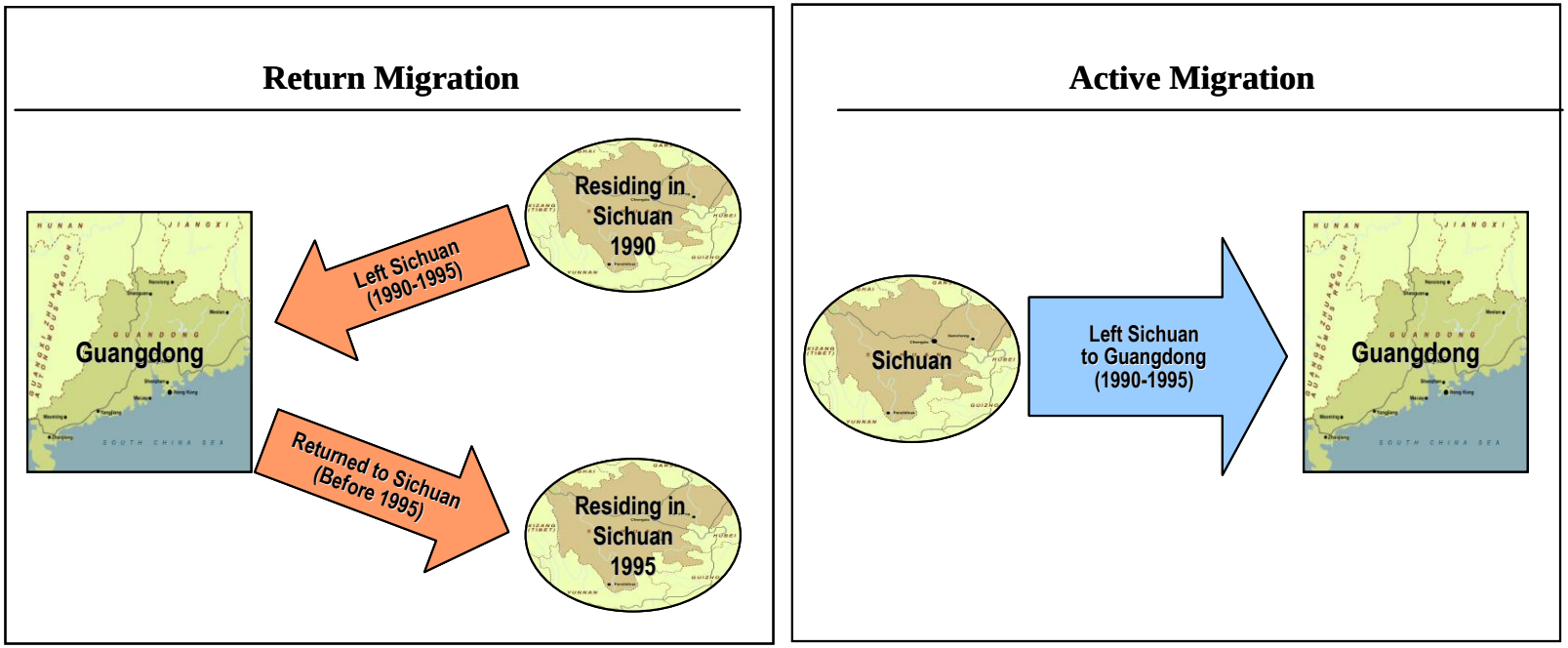

Figure 3. Distribution of Return Migrants by Month (%)