DOMESTIC CHINESE MIGRATION, 1995-2000:

INFLUENCING FACTORS AND

IMPLICATIONS

THESIS

Presented to the Graduate Council of
Texas State University-San Marcos
in Partial Fulfillment
of the Requirements

for the Degree

Master of ARTS

By

Nicholas X. Quincy, B.A., B.A.I.S

San Marcos, Texas
May 2013

DOMESTIC CHINESE MIGRATION, 1995-2000:

INFLUENCING FACTORS AND

IMPLICATIONS

Committee Members Approved:

Frederick Day, Chair

Yongmei Lu

Sarah Blue

Approved:

J. Michael Willoughby
Dean of the Graduate College

FAIR USE AND AUTHOR'S PERMISSION STATEMENT

Fair Use

Duplication Permission

ACKNOWLEDGEMENTS

I would like to thank my committee members Dr. Lu and Dr. Blue for their continued patience and support in creating this, without their help this thesis would never have been completed. Dr. Frederick Day's help was not only essential in the completion of this project, but his constant encouragement and enthusiasm have been a source of inspiration since my days as an undergrad. There are not words enough to express my gratitude for your help.

My professors are not the only ones that must be thanked – mom and dad, I'm not sure what to say. Next to everything you've done for me, your love and support during the creation of my thesis pales in comparison. I guess I should just add it to the tab of things I can never truly thank you enough for.

Finally, to my honorary big sister Jen: one does not simply write a thesis; they must be inspired to do so. You were the inspiration for me to boldly go where I had never gone in my research. And even though it was a long and arduous trek, I thank you for setting the example and helping keep me sane when I couldn't even remember five minutes ago. And should the physicists ever figure out all the wibbly-wobbly, timey-wimey details and invent a time machine to send me back and do it all over again, I'm sure I could get through just fine as long as you were there to give me a hand.

This manuscript was submitted on October 16, 2012.

TABLE OF CONTENTS

Page

LIST OF TABLES

Table **Page**

LIST OF FIGURES

Figure **Page**

CHAPTER I

INTRODUCTION

This research study analyzes the officially documented internal migration in China from 1995 to 2000 using Chinese Census of 2000. That is, it analyzes migration as documented within the census and does not substantively focus on the floating population. It identifies the factors that have most affected migration, as well as examines the effects of distance (in the terms of intra and inter-county migration, and inter-provincial migrations) in the migration process. An examination of the internal migration of China is critical as China has experienced several unique demographic trends. The Chinese government has a history of forcing migration upon its citizens, whilst simultaneously hampering the ability of the population to move freely. Such seemingly contradictory policies have combined to seriously alter the natural internal migration streams. Only in the early 1990s did the government loosen most of the restrictions on migration.

The 2000 Census (which contains records of movement during the previous five-year term) presents the key data set to understanding the effects of the government's policies, as it contains information on migration during a period of relatively lax social control and simultaneous economic boom, thus enabling the assessment of the forces underlying Chinese migration. Furthermore, the 2000 Census contains data at three levels: the inter-province, inter-county, and intra-county, which provide insight into the differences between short and long-distance moves.

This study is presented in the four following chapters, which are ordered as follows: Chapter 2 - Background, Chapter 3 – Literature Review, Chapter 4 – Data and Methodology, Chapter 5 – Analysis, and Chapter 6 – Results and Conclusions. The background chapter details the historical forces that have influenced internal Chinese migration and demographics; this background is broken into three distinct historical eras, as defined by the author. The review of pertinent literature details recent works of substance on contemporary Chinese migration. In addition, this section examines critiques of the data set itself and the value of the 2000 census. Chapter 4 presents the methodology used in this study along with an explanation of the variables and data set. The analysis chapter includes the results of the analysis of the Chinese census data, and it presents the findings with tables. The findings are then analyzed. In the final chapter, a summary of the trends present in the analysis is presented, their significance discussed along with implications for future research.

CHAPTER II

BACKGROUND

In order to fully understand recent shifts in the internal migration of the Chinese population, it is necessary to have a fair understanding of the history of societal and political factors in China that have affected Chinese demographic processes, and in particular, migration trends. Societal and political factors play a significant role, as they have at times drastically influenced the composition and movement patterns of the Chinese population, far beyond the usual amount of influence that these same factors have had in other contemporary states. This section will give a brief overview of the state of Chinese demography and migration prior to 1995 by identifying the forces behind internal migration, as well as discussing social factors and policies that influenced Chinese demographics - policies such as the household registration system (*hukou)*, which was implemented in the 1950s. This overview is divided chronologically into three sections: the pre-socialist era (prior to the creation of the People's Republic of China in 1949), the socialist era during which restrictive policies severely limited the population's ability to move freely, and the modern era that began in the late 1970s with the inception of a more progressive leadership in China which addressed the overpopulation issue by instituting the One-Child Policy, which instituted policies that led to the skewing of the natural demographic makeup of the population that resulted in increased internal migration in order to offset the changes.

Pre-Socialist China

Certain societal and political trends in late 19th and early 20th centuries China persisted during the transition to a socialist government in 1949 and in turn greatly influenced the course of the demographic development of the country. First, there remained a societal bias placing greater importance on the birth of males. Second, was the use of migration to populate disputed areas in order to increase the population of ethnic Han Chinese in them, and third was the phenomenon of temporary labor migration. Each of these three factors had a noticeable effect on the development of pre-socialist China.

The preference for male children predates the modern era, and has had a profound effect on the historical demographics of China. Over the past four hundred years, marital fertility rates were on par with total fertility rates of mid-twentieth century China; recorded live births per married woman were between five and eight children, which is much lower when compared to marital fertility rates of European women during the same period, who produced between seven and eleven live births (Lavely et al. 1990a, pp. 817). It is stipulated that such live birth rates were actually skewed due to the use of "postnatal abortion" by way of infanticide in order to control the number, and more importantly, the sex of the children produced, thus creating a much lower recorded fertility rate (Lee et al. 1989, 1990). It was also discovered that death rates for children on their first day of life were ten times higher for females, during the eighteenth and nineteenth centuries (Lee et al. 1994, pp. 400). This predilection for male children led to a biased sex ratio in historic China.

The two other major, relevant trends of pre-socialist China deal directly with migration. In the early twentieth century, as China attempted to assert control over the Northern region of Manchuria, it facilitated the immigration of Han Chinese in large numbers to the region in order to increase the proportion of Chinese residing there, and

thereby increase its claim to the region. A similar migration occurred during the early twentieth century in Mongolia, and the later creation of Inner Mongolia as a part of the People's Republic of China can be seen as a direct result of the influx of Chinese farmers during this time period (Mallory 1928). This largely rural-to-rural migration can be seen as a possible source of anomaly in the study of internal migration in China during the period, it could be classified as expatriation - the migrants were moving outside of the borders of China, but yet they maintained Chinese citizenship and the areas later became part of China proper. Additionally, during this same time period, evidence of large-scale temporary migration can be found. Data for the port of Darien (one of the primary ports in Manchuria), reveals that the percentage of migrant workers returning to China annually accounted for nearly a third of the in-migration of Chinese to the port (Mallory 1928 pp. 77-78). Thus seasonal workers represented a large portion of all Chinese travelers to the area.

The preference of male births over those of females, the use of migration to consolidate claims on regions, and the large number of temporary migrants were key demographic forces in pre-socialist China. Whilst these factors are but some of the many that defined pre-socialist China, they are the most relevant to the contemporary analysis of Chinese demographic data due to their persistence and lingering effects in the socialist China era.

Socialist China

Following the shift in control of the country from the Nationalist to the Communist led government and the creation of the People's Republic of China in 1949, China entered a socialist era. It is difficult to fully address the demographic trends during the socialist era, as the census' and other surveys of the time were kept secret and largely delayed in their release, thus making it impossible to assess the validity and accuracy of the data. Prior to the 1982

census, an accurate approximation of the total population of China within 100 million was not possible. Furthermore, in these times there were several massive upheavals and government programs upending masses of people, which complicated demographic analysis. However, there are several trends that did emerge during this time that have bearing on the modern era; these trends are most easily described by the government policies that caused them. The specific government policies were the Great Leap Forward and the household registration system, which resulted in a large-scale forced migration with the demographic impact of limiting free migration flows.

The Great Leap Forward began in the spring of 1958 as an attempt by the Chinese government to modernize and improve its industrial production. It failed miserably, leading to famine on an unprecedented scale and the death of millions of Chinese citizens, with the national death rate reaching a peak of 25.4 deaths per thousand two years later in 1960 (Peng 1987). The Great Leap Forward policy also contributed to a nationwide famine that resulted in a decline in the total fertility rate (TFR) throughout the country. The TFR for women up to age 39 prior to the inception of the policy was 5.6 births, but by 1961 the TFR had reached its lowest levels at 3.06 births (Peng 1987). In addition to the loss of life (both in deaths and missed birth opportunities) the program resulted in a massive shift in migration during the affected years. As China attempted to increase the productivity of the industrial sector, massive numbers of migrants left rural areas to fill jobs in urban areas: between the years of 1957 and 1958 alone (the year before the program started and its first year of operation) the population employed in state enterprise grew from 31 to 50 million (Peng 1987). Migration due to the Great Leap Forward drastically upset the normal migration flows.

Another example of the extreme level of influence that the Chinese government had on migration patterns during this time period is the Rustication process, which was instituted to move people from urban areas (primarily unemployed intellectual youths) to rural areas beginning in 1957 (Chen 1972, pp. 366). There were several different official programs that yielded the same, and as such the overall forced movement of people from urban to rural locales during this time period has been designated as the Rustication process (Prybyla 1975). Though the totals vary, and the amount of rustication undertaken varied as the administration shifted its policies, between 30 and 50 million people were moved from urban areas to rural ones in the years between 1957 and 1973 (Prybyla 1975). Thus the natural population flow in China was superseded by government policy, leading to dramatic and lasting demographic shifts.

The household registration system can be seen in some ways as the opposite of the Great Leap Forward in terms of its implementation and demographic effects. The *hukou* system was implemented as a series of laws over the course of the 1950s, to create a household registration system. The effect of this system was the stifling of the natural flow of permanent internal migrants in China (Cheng et al. 1994). The household registration system required a permit for individuals to be able to move to new residences outside of their local area. This created a barrier, primarily to rural migrants, wishing to relocate to urban areas for work, which created a demographic trend of temporary migration for work in China (Cheng et al. 1994). Thus the *hukou* system led to a stifling of permanent population movement whilst expanding and almost institutionalizing the pre-existing temporary migrant population; a trend which carried on into the modern era and has directly impacted migration patterns in China.

Modern China

The modern era of Chinese demographics can loosely be defined as beginning with the dissolution of the Mao-centric government in the late 1970s and the rise of a more pragmatic government under Deng Xiaoping. Restrictions to population movement were eased during this time period (though the *hukou* system remained in place, and provided an invaluable tool for data on migration), and the census of 1982 kicked off a new era of Chinese demographic research (Lavely et al. 1990a). However, certain demographic and social trends from the previous eras remained and directly influenced Chinese migration and demography leading to the mid-1990s. The disaster of the Great Leap Forward and the resulting famine, the One-Child Policy (especially in regards to its impact in urban areas) in conjunction with the preference for male births, and the prevalence of temporary migrant workers are all factors that influence modern Chinese demographics and provide a backdrop for the understanding internal migration of the Chinese population in from 1995 to 2000.

The deaths due to the famine caused by the Great Leap Forward social program have been estimated between 20 and 30 million. In addition to the death toll, the Great Leap Forward also resulted in the loss of education for students: a study in Northern China revealed that 10 successive cohorts of female students did not attain pre-famine levels of education (Lavely et al. 1990b). The severe disruption to social life did not merely create a disturbance in the educational system; demographically, the program and the ensuing famine delayed an estimated 20 million births (Peng 1987).

A number of demographic shifts have emerged since the inception of the One Child Policy. The policy was enacted in the early modern era (1978) as an attempt to quell China's overpopulation problem. As its name implies, it gives families incentives for only having one child, and applies punitive measures to families in urban areas that exceed the prescribed

limit. The fertility rate for urban areas in China fell below replacement in 1974, and remained there throughout this time period largely due to the One Child Policy (China Population Information Center 1988). This loss of fertility in urban areas coupled with the fact that rural families have been regularly having multiple children due to differing regulations for rural areas, has the dual effect of creating a shortage of labor in urban areas and a surplus in rural areas. This, in part, precipitated the rural to urban migration process, dubbed the "floating population" (Lavely 1990b).

Another cultural predilection from the previous eras that has coupled with the One-Child Policy in recent years has been the preference for male children. Due to the advent of technology allowing the sex of the fetuses to be determined and the ability to relatively safely terminate pregnancies prior to birth, a skewing of the gender balance has occurred due to 'female-selective mortality' (Lavely 1990a, Leridon 1977). Whilst a normal ratio of males to females at birth is around 105 to 100, the ratios in some areas of China (primarily the South eastern areas) were at 112 per 100 in the late 1980s (Lavely 1990a). This skewing of the sex ratio can lead to a number of factors that may affect internal migration. One of which is a higher number of males than females available for marriage, resulting in movement of female populations in order to marry.

The lingering effects of the Great Leap Forward and the One-Child Policy, in conjunction with China's preexisting trends for labor migration and gender bias are key components in understanding Chinese demographics and migration. This section has given the background to understand internal Chinese migration directly prior to and during the study time period (1990-2000), which will be examined in the following section. Specifically, it will examine research into the floating population of China, population flows, gender

disparity in migration, and the lingering effects of the household registration system. It will also address research performed using the same data set as this study.

CHAPTER III

LITERATURE REVIEW

Hukou System

As discussed in Chapter 2, the *hukou* system was the method by which the Chinese government was able to control the employment and residence patterns of its population at the micro-level. Since the late 1970s, the state has relaxed its control of the economic and residential sectors, allowing for larger portions of industry and housing to come under private control, thereby giving more of the population the opportunity to migrate within the country without officially changing status and to work in their new locations without being registered (Guo 2004, Han 1999). Government regulations were also relaxed, allowing employers in cities to hire workers who did not have an urban household registration status.

A two-status migration process has emerged from the weakening of the *hokou* system: one status consisting of official migrants, who are classified as permanent migrants, and the other status being temporary migrants, who have been dubbed "floating migrants" (Wang 2004). The floating refers to people without registration (*hukou)* status at their destination.

Permanent migration in China is a much more selective process than temporary migration due to the government regulations regarding the changing of residential status. Even though the restrictions on migration were lessened, the process to change registration is still very difficult and the urban registration process especially is biased in favor of the better educated and wealthy. In the words of C. Cindy Fan, "permanent migrants are the

most privileged and successful elite" (Fan 2002, pp. 103). As such, permanent migrants can be viewed as a distinct group of migrants – ones that are vying for different economic opportunities and have different migration preferences than their floating population counterparts.

Floating Population

The dramatic shift in population processes within China is a result of the transition from a planned (or regulated) economic system to a market-oriented economy. During this transition the household registration system (*hukou*) was weakened (Wang 2004). Government regulations on the agricultural sector were reduced, and due to reforms such as the household responsibility program which allowed farmers to have greater control over production, agricultural industry required less labor (Zhang 2001). By making the agricultural sector more efficient, the government set the stage for an influx of the surplus rural workforce into urban areas – an influx that resulted in the creation of a massive, temporary migrant population known as the "floating population" (*liudong renkou)* (Yang 1999).

To date, the floating population in China is one of the largest domestic migration processes ever experienced in the world. The Chinese census distinguishes the floating population as residents that have been living without a *hukou* status for at least six months. Micro-data from the 2000 census puts the number of inter-county floating migrants at 79 million. When the number of intra-county floating migrants are taken into account as well, the total comes to approximately 144 million (Fan 2002). In contrast, the number of permanent inter-county migrants during the same time period is approximately 20 million.

Permanent migrants in China may seem insignificant when compared to the sheer number of floating migrants, but despite their smaller proportions permanent migrants make up a distinct and relevant part of domestic migration streams. The composition of the two

migrant groups varies, and focusing on one only does not reveal the entire picture of Chinese migration.

Trends within the floating population have been uncovered in the 2000 census micro-data. In particular, Liang and Ma's examination of the 2000 census revealed that over one quarter of the inter-county floating population resided in Guangdong province (approximately 21 million) (Liang and Ma 2004). In addition to Guangdong, the provinces of Zhejiang and Jiangsu (on the Eastern coast near Shanghai) each had floating populations of around 5 million. Given the prevalence of inter-county floating migrants in these three provinces, a clear trend of migration to the East coast has emerged.

The floating population can also be defined as a manual-labor focused migration process. The percentage of male floating migrants ages 15-29 and 30-44 who reported their reason for migration as being "looking for manual labor or business" were 79 and 84 percent. Among the permanent migrants the percentages for the same categories were 4 and 17 percent (Liang 2004). From this we can discern that migration for permanent migrants is far less likely to be tied to primary industry and those areas of the secondary industry that include mining, construction, and low-skilled manufacturing and as such permanent migrants would be more likely to be migrating to non-industrial areas.

Trends in Chinese Migration 1982-1995

From 1982 to 1995 several trends emerged, aside from the growing floating population. Most notably there was an increase in the number of interprovincial migrants. The number of interprovincial migrants increased from 4 million to 11 million between 1987 and 1995; in the 2000 census this number jumped to approximately 42 million (Liang 2001). The large discrepancy between the 1995 and 2000 numbers is possibly due to the fact that

the 1995 figures were drawn from a survey, but nonetheless, the increase in interprovincial migration is notable.

The increased interprovincial migration can be seen as a counterpart of another trend that emerged over this time period, that is a decrease in the city-to-town migration, and an increase in both town-to-city and city-to-city migration (Liang 2001). Chinese migrants over the course of the eighties and early nineties began to reject the government policy of 'urbanization from below' and to move directly to large urban areas (Liang 2001). With migrants removing intermediary destinations in the decision on where to go, the percentages of long-distance and inter-provincial migration increased.

From these diverse, but intertwined elements, we can begin to paint a picture of migrants recorded by the census in China. Most of the sample in the census would be of permanent migrant status, meaning a generally higher education and income levels than floating migrants. Most likely permanent migrants would be more inclined to migrate to counties with economies devoted to white-collar or service industries. Migration trends would indicate a higher level of migration to coastal areas, and areas with high levels of urbanization. In addition, due to the extra barriers to permanent migration it could be stipulated that these migrants would be less likely to move into areas with already high levels of unemployment.

Sinification

Ethnic autonomous regions and areas of China that have had high national minority populations have been subject to a process known as Sinification – whereby the local ethnic population is subsumed by an influx of Han. In some cases the in-migration of ethnic Han has been a part of government programs meant to redistribute the population. Perhaps the most notable of these was the *xiafang* (rustication), which officially began in 1956. The

xiafang was responsible for the in-migration of Han into "Third Front" locations throughout the 1950s and 1960s, the two primary purposes of the attempt at Sinification in these areas were 1) increase the integration of ethnic minority areas and 2) strengthen the security of China's borders (where many ethnic areas are) (Dreyer 1975). Between the 1950s and 1970s, China actively relocated Han Chinese into Xinjiang, Inner Mongolia, and Heilongjiang (Howell 2011).

Though the *xiafang* ended in the 1970s, the process of Sinification continued. According to the 2000 census, the Han population in Xinjiang has increased to 40%, only 17% of residents in Inner Mongolia are ethnic Mongolian, and the majority of residents in the urban areas of the Tibetan Autonomous Region are Han Chinese (Fischer 2008). Each of these areas has been the subject of research into the varying levels of disparity between the national minorities and Han Chinese that have in-migrated (Fischer 2008; Howell 2011).

CHAPTER IV

DATA AND METHODOLOGY

Data

The data for the analysis are taken from the 2000 Chinese census. The Chinese census data contain information for 2,391 counties; complete data on migration are only available for 2,368 of those counties – comprising the study area for this research. Two forms of data are present in the census: aggregate data from the 2000 population Census, and aggregate data from the 2000 population Long Table Data, which is based on a 9.5% sample. Given the size of the Chinese population, a sample of 9.5% yields a dataset that is sufficient to be used in analysis. Data on migration were collected by asking respondents to the census whether they had moved within the past five years, and then at which scale, thus giving information on migration for the time period between 1995 and 2000.

Dependent Variables

Data for migration at three different scales were used to create an aggregate variable – Migrants as a Percentage of the Total County Population (henceforth referred to as Percent Migrants). This variable was constructed in this manner due to the unavailability of previous census data for this research, thereby removing the possibility for the calculation of a net migration rate, which cannot be calculated without statistics on out-migration (the 2000 census data does not contain data on out-migration). The Percent Migrants will serve as the variable for the analysis of total migration within each county. Percent Migrants together with the percentages of migration at three scales: intra-count, inter-county, and

inter-provincial , will serve as the four dependent variables for the analysis.

The greatest concentrations of counties with high levels of migration at the intra-county, inter-county, and inter-provincial scales are found around the major cities of the coast, and in the Western Provinces of Xixang (Tibet), Xinjiang, Qinghai, and in Inner Mongolia. The counties with the highest levels of migration, those having somewhere between one quarter and four fifths of their population classified as migrants, are spatially distributed throughout the country, with each province having at least one high migration county.

Data for in-migration to counties at the three following scales was used in the analysis: a) Intra-County Migration which reports movement within the same city or county, b) Inter-County Migration which reports movement into the county from another county within the same province, and c) Inter-Provincial Migration which reports movement into the county from another province. The total number of migrants at each of these three scales was then used to calculate the percentage of those migrants in relation to the total number of migrants in each county. This yielded three variables for the analysis:
1) Percentage of Intra-County Migration, 2) Percentage of Inter-County Migration, and 3) Percentage of Inter-Provincial Migration. The spatial distribution of these three variables can be seen respectively in Figure 2, Figure 3, and Figure 4. Figure 1 is an overview of migrants as a percentage of the total population in each county. The classification method for the following maps is based upon natural breaks (jenks) in the levels of migration as determined by the mapping software.

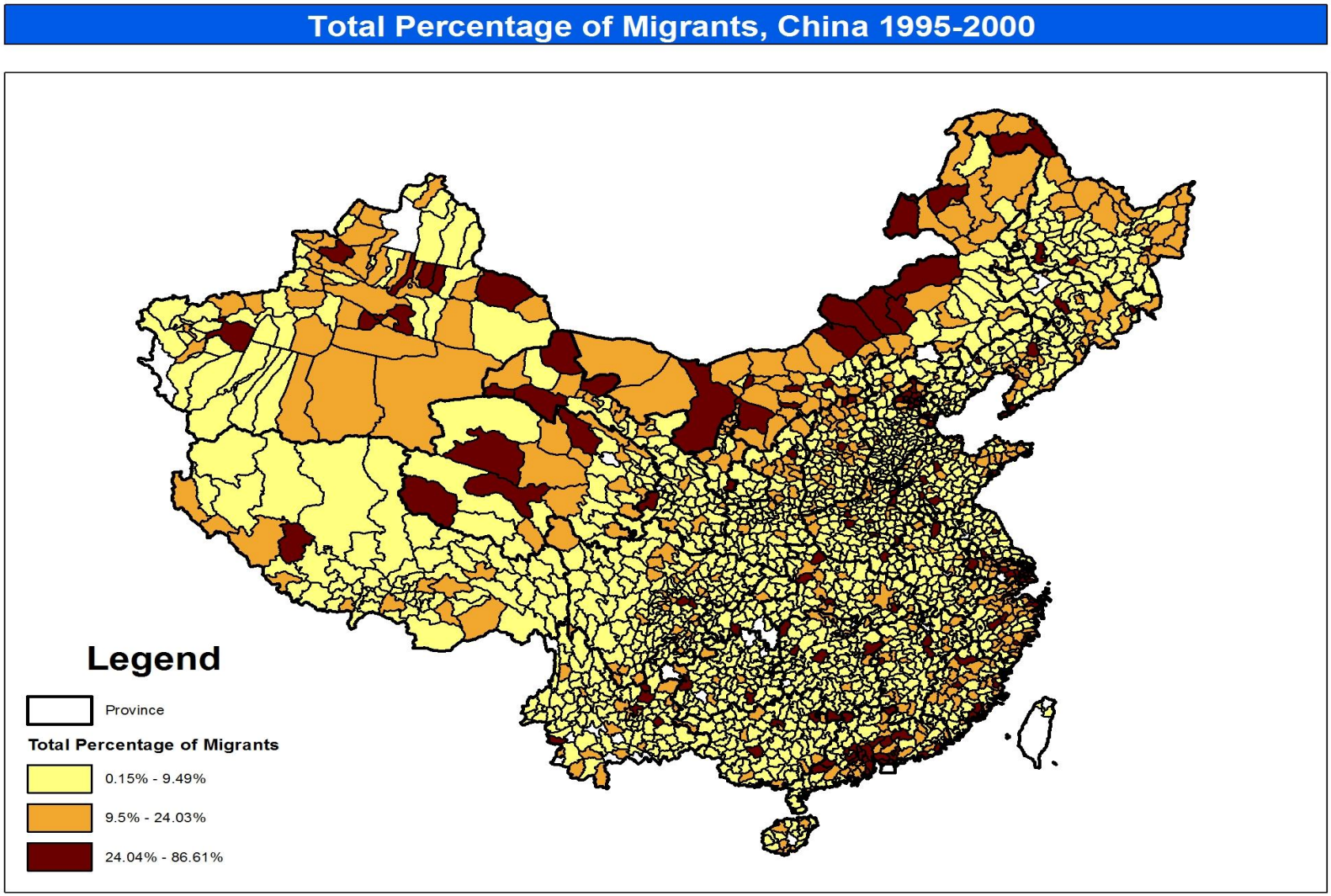

Figure 1. Migration in Chinese Counties: 1995-2000

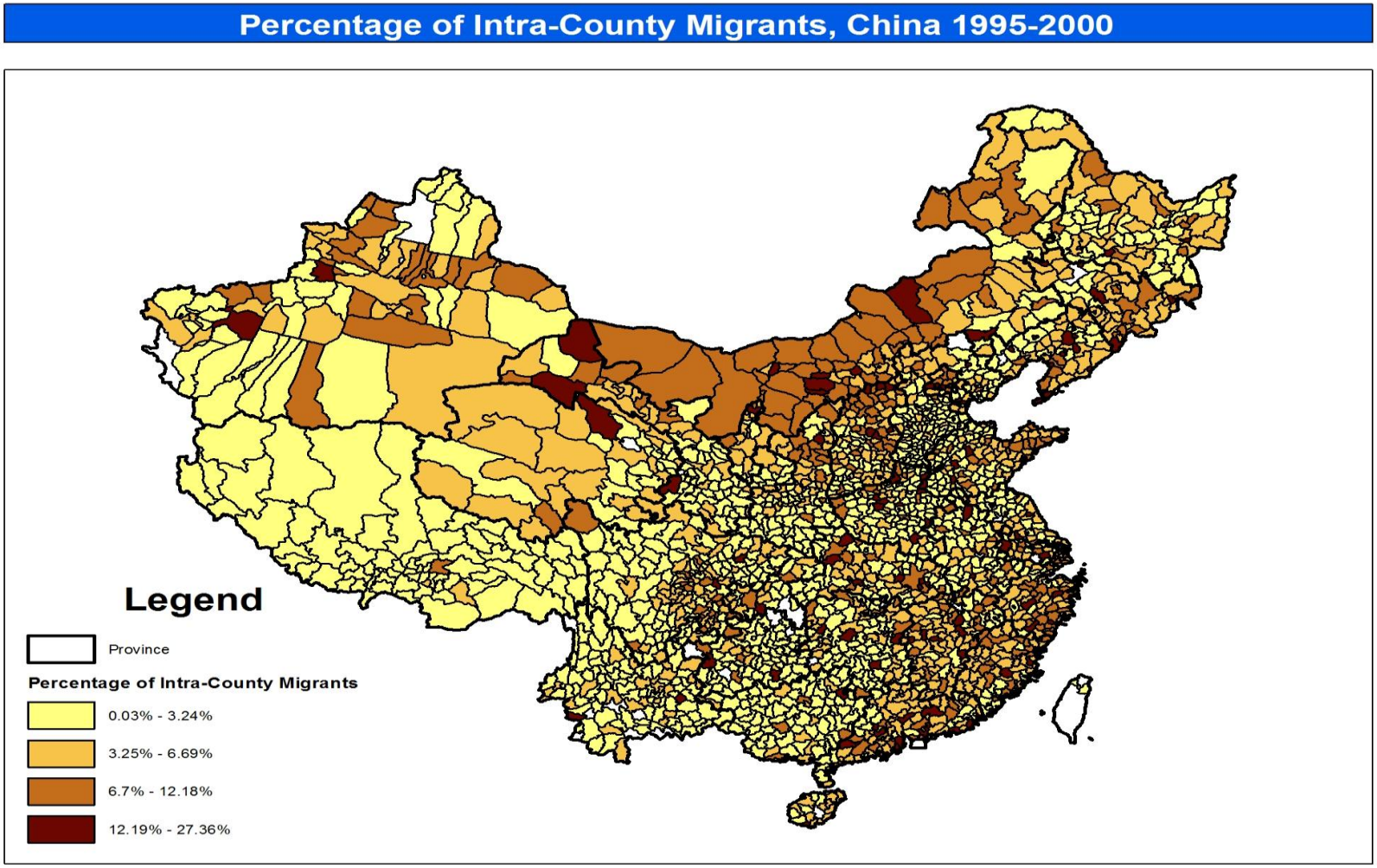

Figure 2. Intra-County Migration in Chinese Counties: 1995-2000

The highest percentages of Intra-County migrants are found in counties along the Northern border of China in the province of Inner Mongolia (Neimongol), and the counties of the Southeast coast (Figure 2). The Southeastern counties are home to many of the large urban areas of China, and due to the nature of urban housing, a high level of short-range migration is reasonably expected. The concentration in Inner Mongolia may be attributable to the larger size of the counties, as migrants would have to move longer distances to in order to cross county lines, more migration is classified as intra-county. Intra-county migrants only account for 6.7% to 12.18% of the total number of migrants: as such even in counties with high intra-county migration, the number of migrants is relatively low.
The spatial distribution of Inter-County Migration (Figure 3) is much more dispersed than that of the Inter-County migration, areas of high inter-county migration are much less contiguous. Areas with high percentages of inter-county migration can be found in South, specifically those counties around Hong Kong, and Inner Mongolia.

Perhaps the most interesting aspect of the Inter-Provincial Migration is the generally low level of migration found in the provincial border counties (Figure 4). Particularly those in the eastern portion of China, as the county size is quite small: thereby short to mid-range migration would result in the crossing of provincial boundaries during migration. Pockets of high inter-provincial migration can be seen surrounding the urban-centers along the coast, illustrating their drawing power.

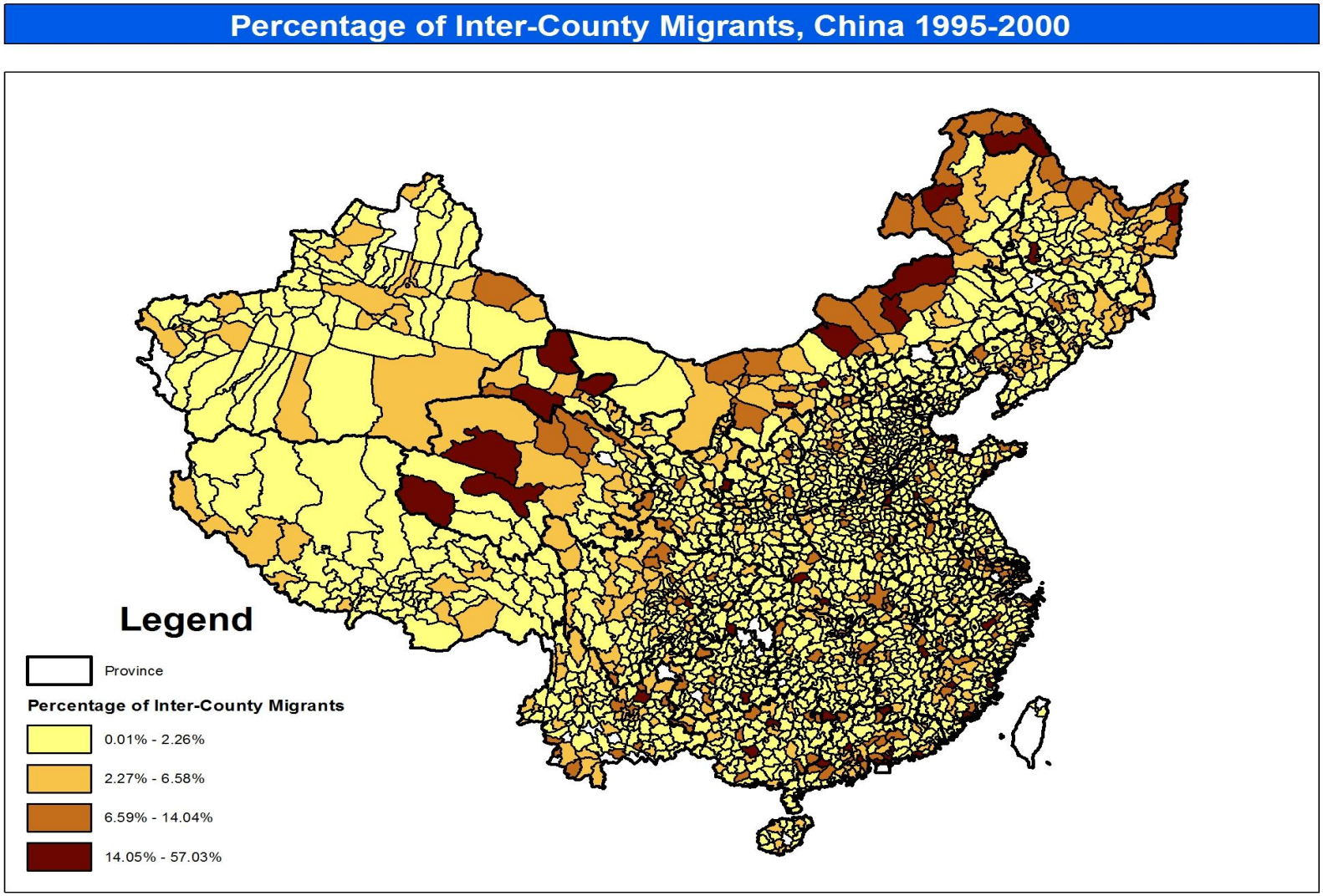

Figure 3. Inter-County Migration in Chinese Counties: 1995-2000

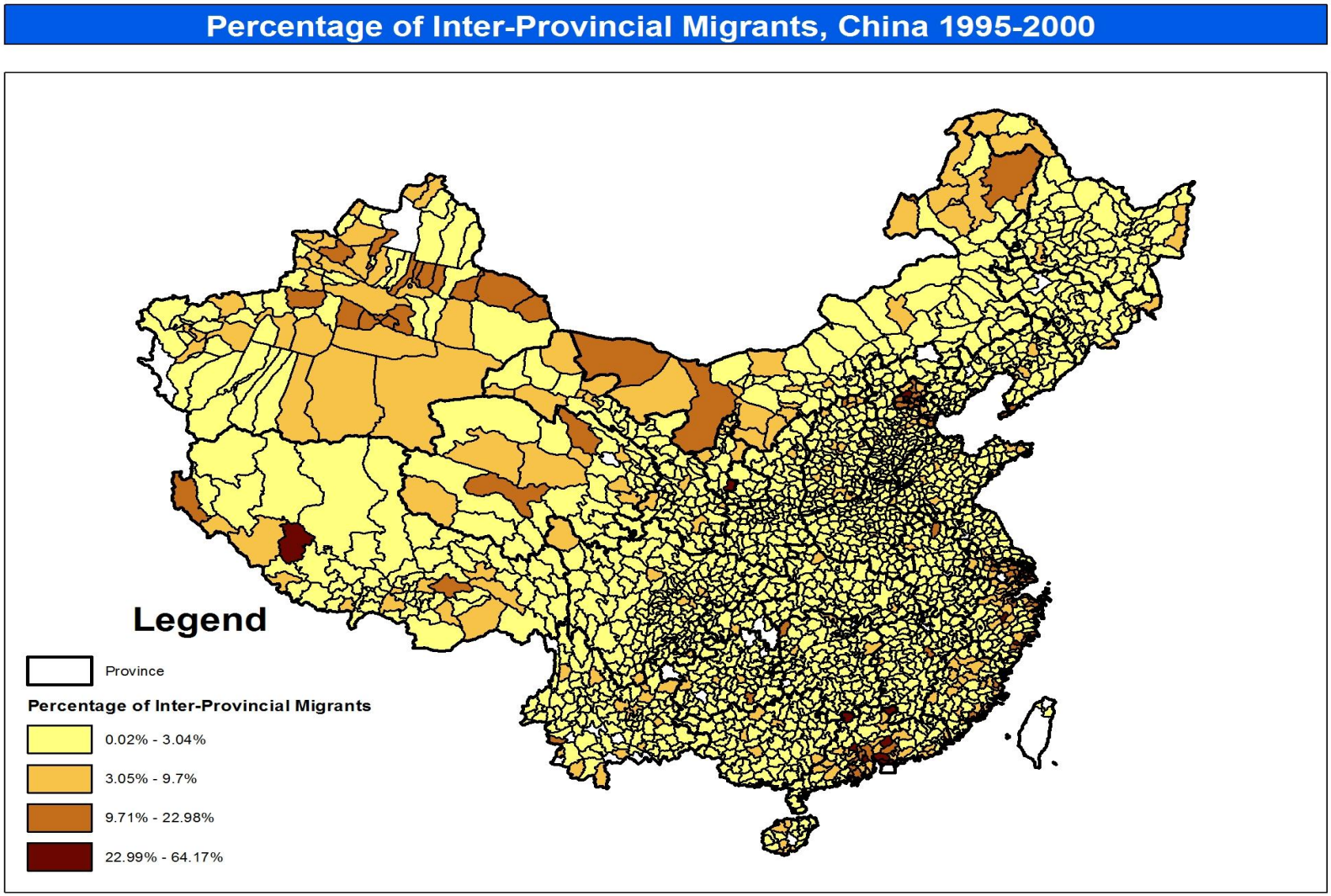

Figure 4. Inter-Provincial Migration in Chinese Counties: 1995-2000

Independent Variables

Variables drawn from the Long Table Data will be designated with an asterisk. These variables were created as percentages based upon other variables within the Long Table Data in order to display their relative importance and to put them in a comparable form.

Percent Employed: the percentage of the population that is already employed. This variable was derived as a percentage of the total population recorded in the Long Table Data (which was a combination of the Total Employed Population and the Total Non-Working Population variables in the census). It was chosen as a variable in order to gauge the impact that an already full workforce had upon in-migration.

Percent Seeking Employment: the percentage of the population seeking employment. This variable was derived as a percentage of the total population in the Long Table Data. It represents the combination of the 1) Never Had a Job and Looking for a Job, and 2) Lost Job and Looking for Job variables from the census. Other sectors of the non-working population such as students and those that lost the ability to work were not included, as they were not actively engaged in the pursuit of work. This variable was chosen as a surrogate for a total unemployment rate within the counties, and to allow for the effects of unemployment on migration to be shown in the analysis.

Percent Employed in Industry: The three following variables represent the different percentages of the employed population engaged in the three main sectors of the economy and were chosen to examine the effects of employment types on migration. These were already calculated as a percentage in the Long-Table Data, and there was no need to modify them. (Maps displaying these independent variables are contained in Appendix A.

1. ***Percent Employed in Primary Industry:*** the percent employed in agriculture, mining and raw material production.
2. ***Percent Employed in Secondary Industry:*** the percent employed in manufacturing, heavy industry, and production.
3. ***Percent Employed in Tertiary Industry:*** the percent employed in service industries and white-collar professions.

Percent Non-Agricultural: The percent of the population that is non-agricultural. This variable was chosen in order to provide an indicator of the general level of urbanization within a county as to its relevance to migration.

Percent Nuclear Households: The percent of family households in the county comprised of single resident or houses with one or two generations (any household that is non multi-generational). The single resident variable was added to the traditional nuclear households for the creation of this variable: despite the inclusion of the single residents, this variable will be referred to as Percent Nuclear Households henceforth. The literature has suggested that in the most urban areas of China, the traditional multi-generational family has declined, being replaced by nuclear family units. This variable was chosen to serve as an additional indicator of urbanization as counties with higher percentages of nuclear households will be more urbanized, or more engaged in modern business and industrial activity (thus yielding more single person households).

Percent Minority: the percent of the population that is Non-Han Chinese, and classified as one of the country's 56 ethnic minorities. This variable was chosen in order to determine whether high percentages of minority population are important to in-migration.

TABLE 1

Descriptive Statistics of the Dependant and Independent Variables From the Chinese Census

	Mean	Minimum	Maximum	Range
Migrants as a Percentage of the Total County Population	8.74	0.15	86.61	86.47
Percentage of Intra-County Migration	4.41	0.03	27.36	27.33
Percentage of Inter-County Migration	2.28	0.01	57.03	57.02
Percentage of Inter-Province Migration	2.05	0.02	64.17	64.16
Percent Employed	75.86	42.91	95.09	52.18
Percent Seeking Employment	2.29	0.00	19.61	19.61
Percent Employed in Primary Industry	70.13	0.14	97.40	97.26
Percent Employed in Secondary Industry	12.64	0.00	81.18	81.18
Percent Employed in Tertiary Industry	17.22	2.23	96.70	94.47
Percent Non-Agricultural Population	20.61	2.07	96.96	94.89
Percent Nuclear Households	81.30	48.47	98.21	49.74
Percent Minority Population	18.60	0.00	99.78	99.78

Each of the variables chosen for analysis has a notable range (Table 1), which indicates inter-county variation that is suitable for investigation. Mean values for the percentages of migration at the three levels are relatively low but this is due to their being components of the larger Total Migration Percentage, which has a higher mean.

TABLE 2: Multivariate Correlation

Pearson Multivariate Correlation		Total Migration Percentage	Percentage of Intra-County Migration	Percentage of Inter-County Migration	Percentage of Inter-Province Migration	Percent Employed	Percent Seeking Employment	Percent Employed in Primary Industry	Percent Employed in Secondary Industry	Percent Employed in Tertiary Industry	Percent Non-Agricultural Population	Percent Nuclear Households	Percent Minority Population
Total Migration Percentage	Pearson Correlation	1	.739**	.814**	.779**	-.558**	.563**	-.821**	.716**	.793**	.692**	.433**	-.122**
	Sig. (2-tailed)		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Percentage of Intra-County Migration	Pearson Correlation	.739**	1	.479**	.285**	-.626**	.633**	-.706**	.578**	.721**	.706**	.411**	-.225**
	Sig. (2-tailed)	0.000		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Percentage of Inter-County Migration	Pearson Correlation	.814**	.479**	1	.462**	-.431**	.455**	-.635**	.492**	.679**	.609**	.341**	-.033
	Sig. (2-tailed)	0.000	0.000		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.112
Percentage of Inter-Province Migration	Pearson Correlation	.779**	.285**	.462**	1	-.268**	.255**	-.582**	.589**	.473**	.334**	.268**	-.034
	Sig. (2-tailed)	0.000	0.000	0.000		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.098
Percent Employed	Pearson Correlation	-.558**	-.626**	-.431**	-.268**	1	-.836**	.764**	-.620**	-.787**	-.763**	-.406**	.239**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000		0.000	0.000	0.000	0.000	0.000	0.000	0.000
Percent Seeking Employment	Pearson Correlation	.563**	.633**	.455**	.255**	-.836**	1	-.721**	.576**	.752**	.834**	.396**	-.187**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000		0.000	0.000	0.000	0.000	0.000	0.000
Percent Employed in Primary Industr	Pearson Correlation	-.821**	-.706**	-.635**	-.582**	.764**	-.721**	1	-.923**	-.909**	-.821**	-.410**	.245**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000		0.000	0.000	0.000	0.000	0.000
Percent Employed in Secondary Industry	Pearson Correlation	.716**	.578**	.492**	.589**	-.620**	.576**	-.923**	1	.679**	.644**	.317**	-.305**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.000	0.000	0.000	0.000
Percent Employed in Tertiary Industry	Pearson Correlation	.793**	.721**	.679**	.473**	-.787**	.752**	-.909**	.679**	1	.870**	.439**	-.138**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.000	0.000	0.000
Percent Non-Agricultural Population	Pearson Correlation	.692**	.706**	.609**	.334**	-.763**	.834**	-.821**	.644**	.870**	1	.433**	-.146**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.000	0.000
Percent Nuclear Households	Pearson Correlation	.433**	.411**	.341**	.268**	-.406**	.396**	-.410**	.317**	.439**	.433**	1	-.179**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.000
Percent Minority Population	Pearson Correlation	-.122**	-.225**	-.033	-.034	.239**	-.187**	.245**	-.305**	-.138**	-.146**	-.179**	1
	Sig. (2-tailed)	0.000	0.000	0.112	0.098	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

**. Correlation is significant at the 0.01 level (2-tailed).

Methods

****Correlation:*** The dependent and independent variables were tabulated in a multivariate correlation table in order to discern the level of association. The purpose of the correlation matrix was to discern how the variables co-varied with one another (Table 2). At the 0.01 level of confidence all independent variables were significant for the four scales of migration using a 2-tailed test of significance – these variables were determined to be usable for the regression analyses that followed. This correlation was measured with the Pearson Multivariate Correlation coefficient, the most usual correlation indicator; Kendall's Tau and Spearman correlations were also considered but not included.

****Regression:*** A series of backwards multiple linear regressions were performed in order to determine the importance of the independent variables to in-migration. Backwards regression was chosen so that in each instance of regression the variables would be weighted for significance, and then removed if inapplicable, thereby giving a clear picture of which variables are relevant for analysis. The dependent variables used for the regressions were the four previously mentioned in this section, as well as a breakdown of the Percent Migrants by intensity of migration. This subset was created through the classification of the counties based upon their percentage of total migrants broken down by natural breaks (jenks), which resulted in a subset with three categories which have been labeled as: High Migration Counties, Moderate Migration Counties, and Low Migration Counties. This subset was created in order to examine the importance of the independent variables not only at different scales of migration, but also at different magnitudes of migration.

****Discriminant Analysis:*** Following the regressions a discriminant analysis was performed on the three classes of counties, which were assigned to their respective classes based upon the percentage of migration in the Percent Migrants variable. The purpose of the

discriminant analysis was to determine whether the independent variables chosen for this research were able to explain the levels of migration in Chinese counties.

CHAPTER V

ANALYSIS

Regression Analyses of Domestic Chinese Migration, 1995-2000

In order to understand which factors are most tied to in-migration in China, three sets of backwards multiple linear regressions were performed. The interpretive statistics that are presented for the analyses are the R-values, the cumulative R^2 and the Beta values. The Beta values indicate the relative strength and direction of the relationship of each independent variable with the dependent variable used in that regression. In the use of backwards regression, variables that are deemed unfit for the analysis were removed from the final regression models. Independent variables that have been removed will be pointed out in table notes.

Due to the high inter-correlation between the three sectors of the economy, regression with all three sectors could obfuscate the importance of sectors that were removed during the regression analysis. In order to illustrate the full significance of each of the three sectors of the economy, each regression table presents the results of three runs of the same backwards regression, with pairings of two sectors of the economy in each. Beta values between models only differ in the two sectors of the economy being analyzed, and R-values and R^2 remain the same. The comparison of the differing Beta values between each model allow for the full scope of the 'causative' significance of each sector of the economy to aid in the explanation of migration patterns.

Total Migration

TABLE 3
Summary of Significant Variables Related to Migrants as a Percentage of the Total County Population in China, 1995-2000[a]

Model		Beta	R	Adjusted R^2
1	R Values for Model	-	.851[b]	0.724
	Percent Employed in Primary Industry	-.679		
	Percent Employed in Tertiary Industry	.335		
	Percent Employed	.263		
	Percent Nuclear Households	.123		
	Percent Minority Population	.050		
2	R Values for Model	-	.851[b]	0.724
	Percent Employed in Primary Industry	-1.320		
	Percent Employed in Secondary Industry	-.363		
	Percent Employed	.263		
	Percent Nuclear Households	.123		
	Percent Minority Population	.050		
3	R Values for Model	-	.851[b]	0.724
	Percent Employed in Secondary Industry	.386		
	Percent Employed in Tertiary Industry	.691		
	Percent Employed	.263		
	Percent Nuclear Households	.123		
	Percent Minority Population	.050		

a. Dependent Variable: Total Migration Percentage

b. Predictors Removed: Percent Seeking Employment, Percent Non-Agricultural Population

When considering the total percentage of county population who are migrants, the Percent Employed in Primary Industry was most importantly related to migration (Table 3). The negative relation between percent employed in primary industry and the Percent Migrants in the county indicates that those counties with a greater percentage of their population employed in primary industry (that is, counties with higher levels of agricultural and natural resource production) tend to have fewer in-migrants. Without the variable of primary industry in the analysis, the variables most importantly related to migration were

those that had higher levels of employment in secondary and tertiary industries; especially those that had a greater level of employment in the tertiary sector. The positive relationship between these two sectors of the economy and the percent of migration indicated that counties with more of their workforce devoted to the production and service industry experienced greater overall levels of migration.

The percent of employed population in a county had a moderately significant positive relationship with the level of migration in a county. It is possible that in counties with larger percentages of their population in actively seeking employment or actively employed, there is a larger mobile population (a population that is not tied to location due to factors such as retirement, or being in school) and therefore more willingness to move within the county. This could also be potentially explained as areas with larger workforces being attractors for migrants from outside of the county, and the correlation is due to in-migration for possible employment. This variable is one to examine in the later regressions, as either of these possible explanations could be borne out in one of the other scales of migration. At this scale these independent variables accounted for 72% of the total variance, indicating a high level of explanation when examining the total percentage of migrants.

Intra-County Migration

TABLE 4
Summary of Significant Variables Related to Intra-County Migration in China, 1995-2000

Model		Beta	R	Adjusted R^2
1	R Values for Model	-	.755[b]	0.570
	Percent Employed in Primary Industry	-.172		
	Percent Employed in Tertiary Industry	.269		
	Percent Seeking Employment	.076		
	Percent Non-Agricultural Population	.219		
	Percent Nuclear Households	.082		
	Percent Minority Population	-.085		
2	R Values for Model	-	.755[b]	0.570
	Percent Employed in Primary Industry	-.687		
	Percent Employed in Secondary Industry	-.292		
	Percent Seeking Employment	.076		
	Percent Non-Agricultural Population	.219		
	Percent Nuclear Households	.082		
	Percent Minority Population	-.085		
3	R Values for Model	-	.755[b]	0.570
	Percent Employed in Secondary Industry	.098		
	Percent Employed in Tertiary Industry	.359		
	Percent Seeking Employment	.076		
	Percent Non-Agricultural Population	.219		
	Percent Nuclear Households	.082		
	Percent Minority Population	-.085		

a. Dependent Variable: Percentage of Intra-County Migration

b. Predictors Removed: Percent Employed

At the intra-county scale, employment in the three sectors of the economy was of varying importance to intra-county migration (Table 4). Counter to the previous regression with all migrants, primary industry did not exert the most influence on the analysis. In the two regressions in which the primary industry variable was present, it once again was

negative which indicates that it is associated with counties with less movement at the local level. The most important of the three sectors of the economy in this regression was the Percent Employed in Tertiary Industry. While primary industry had the single highest Beta value in this regression, tertiary industry had the highest Beta in both of the analyses in which it was included. In both instances, tertiary employment produced positive Beta values, indicating that at the intra-county scale counties with higher levels of employment in service and white-collar type jobs had higher levels of short-range migration.

Another variable of interest was the Percent Non-Agricultural Population. Aside from the module with primary and secondary industry together, the non-agricultural population produced the second highest Beta. The positive Beta for this variable signifies that the higher the percentage of the population that is urbanized (or non-agricultural) in a county, the more migration that county will experience. The level of unemployment, percentage of nuclear households, and the concentration of minorities all had similar impacts in this regression. None were of great importance, but they did show an impact on migration. One note of interest was the switching of the signs for the minority population variable: looking at all migrants Percent Minority Population had a slight but still positive relationship with migration, whereas at the local scale counties with higher percentages of minority population had less migration.

TABLE 5
Summary of Significant Variables Related to Inter-County Migration in China, 1995-2000

Model		Beta	R	Adjusted R^2
1	R Values for Model	-	.712[b]	0.506
	Percent Employed in Primary Industry	-.198		
	Percent Employed in Tertiary Industry	.592		
	Percent Employed	.287		
	Percent Seeking Employment	-.058		
	Percent Non-Agricultural Population	.175		
	Percent Nuclear Households	.074		
	Percent Minority Population	.057		
2	R Values for Model	-	.712[b]	0.506
	Percent Employed in Primary Industry	-1.328		
	Percent Employed in Secondary Industry	-.641		
	Percent Employed	.287		
	Percent Seeking Employment	-.058		
	Percent Non-Agricultural Population	.175		
	Percent Nuclear Households	.074		
	Percent Minority Population	.057		
3	R Values for Model	-	.712[b]	0.506
	Percent Employed in Secondary Industry	.112		
	Percent Employed in Tertiary Industry	.695		
	Percent Employed	.287		
	Percent Seeking Employment	-.058		
	Percent Non-Agricultural Population	.175		
	Percent Nuclear Households	.074		
	Percent Minority Population	.057		

a. Dependent Variable: Percentage of Inter-County Migration

b. Predictor Removed: None

***Inter-County Migration**

At the inter-county scale the most important variable in regards to migration was once again Percent Employed in Tertiary Industry (Table 5). The employment in tertiary industry was also of importance at the intra-county scale, but the Beta values for this variable at the inter-county scale are approximately double those at the local level. The high Beta values for tertiary industry indicate that there is a very strong relationship between counties with high levels of skilled labor and in-migration from within the same province. That is to say, when migrating within the same province migrants moved to counties that had high levels of employment in service and white-collar jobs. Percent Employed in Primary Industry continued to have a negative relationship with migration, continuing the trend that areas with high levels of agricultural and natural resource production are not experiencing much permanent in-migration, but most likely, we could speculate, permanent out-migration.

Of note is the high Beta value for the Percent Employed variable. While this variable was dropped from the regression at the intra-county scale, it was included in the total migration regression – here at the inter-county scale the Percent Employed variable continues to have a positive and pronounced relationship with migration. Counties with higher levels of overall employment have higher levels of migrants from within their own province. Together with the tertiary employment Beta, it can be inferred that counties that have lots of people already working, and working in service industries, are the counties that migrants who are able to obtain permission choose to migrate to within their province. Once again the non-agricultural variable has a positive effect on permanent in-migration, indicating flow to urban areas. The percentage of nuclear households in a county did not have a pronounced relationship with inter-county migration, nor did the percentage of minority population. However, at this scale the minority population variable's relationship with in-

migration returned to positive, which makes the negative relationship at the local scale more interesting.

Inter-Province Migration

TABLE 6
Summary of Significant Variables Related to Inter-Provincial Migration in China, 1995-2000

Model		Beta	R	Adjusted R^2
1	R Values for Model	-	.683[b]	0.466
	Percent Employed in Primary Industry	-1.110		
	Percent Employed	.315		
	Percent Non-Agricultural Population	-.373		
	Percent Nuclear Households	.126		
	Percent Minority Population	.131		
2	R Values for Model	-	.683[c]	0.466
	Percent Employed in Primary Industry	-1.110		
	Percent Employed	.315		
	Percent Non-Agricultural Population	-.373		
	Percent Nuclear Households	.126		
	Percent Minority Population	.131		
3	R Values for Model	-	.683[d]	0.466
	Percent Employed in Secondary Industry	.631		
	Percent Employed in Tertiary Industry	.580		
	Percent Employed	.315		
	Percent Non-Agricultural Population	-.373		
	Percent Nuclear Households	.127		
	Percent Minority Population	.131		

a. Dependent Variable: Percentage of Inter-Provincial Migration

b. Predictors Removed: Percentage Employed in Tertiary Industry, Percent Seeking Employment

c. Predictors Removed: Percentage Employed in Secondary Industry, Percent Seeking Employment

d. Predictors Removed: Percent Seeking Employment

The inter-provincial scale of migration yielded perhaps the most interesting regression analysis thus far (Table 6). Beta values for the Percent Employed in Primary Industry are quite high. Primary industry had high Beta values in other regressions, but this regression is notable as secondary and tertiary industries were both dropped from the regression during the runs in which they were paired with primary industry. At both the inter-county and intra-county scales tertiary industry maintained a higher Beta value than primary industry when the two were paired. Despite the high Beta values for the Primary industry variable, the relationship between employment in primary industry and the level of in-migration continue to be negative, as it has been in every regression thus far. Both Percent Employed in Tertiary Industry and Percent Employed in Secondary Industry continue to have Beta values. However, for the first time the secondary industry variable has a higher Beta value when paired with the tertiary industry variable, indicating that the percentage employed in manufacturing has a slightly stronger influence on migration to a county from other provinces.

Even though the primary industry variable's Beta value is high and the importance of secondary industry at this scale is higher than the importance of tertiary industry, the most important aspect of this regression is the Percent Non-Agricultural Population variable. This variable has been of some significance in past regressions, but at the provincial scale it underwent a pronounced change. Its Beta value is at its highest indicating that the Percentage of Non-Agricultural Population is most important at this scale. In addition, the variable changed signs and has a negative relationship with official migration. The percentage of non-agricultural population has a negative relationship with official in-migration at the provincial scale. This seems contradictory due to the positive relationship between employment in both the secondary and tertiary industries and migration at this scale. This

would seem to indicate that counties with high levels of secondary and tertiary employment experience high levels of official in-migration whilst at the same time more urban counties (those that would presumably contain a lot of secondary and tertiary employment) do not have high levels of official in-migration.

Other variables of note in this regression are the Percent Employed and the Percent Minority Population. At this scale the percent employed variable maintained its high level of importance to migration – indicating that counties with high levels of employment have high levels of migration from other provinces. The importance of the Percent Minority Population is higher at this scale than at any other, its Beta value is notable and positive. The continued positive relationship between the percentage minority and migration makes the negative relationship at the local scale something to be considered, as it appears to indicate that the counties with high percentages of minorities receive more long distance immigrants than short distance ones.

Discriminant Analysis

The three groups for this analysis were designated as High Migration, Moderate Migration, and Low Migration counties; the groups were created based upon natural breaks (jenks) in the Total Percentage of Migration within each county. High Migration counties are those having greater than 24% of their total population as migrants (the maximum being 86%), Moderate counties are those between 9.5% and 24%, and Low counties are those under 9.5%. Counties were individually assigned to each group based upon their corresponding Total Percentage of Migration, resulting in 177 counties classified as High Migration, 500 classified as Moderate Migration, and 1691 in the classification of Low Migration.

TABLE 7

Means For County Groups

	Low Migration Counties	Moderate Migration Counties	High Migration Counties
Percent Employed in Primary Industry	79.96	53.66	22.76
Percent Employed in Secondary Industry	7.84	20.96	35.05
Percent Employed in Tertiary Industry	12.20	25.38	42.19
Percent Seeking Employment	1.62	3.57	5.03
Percent Employed	78.91	69.84	63.64
Percent Non-Agricultural Population	13.61	32.81	52.97
Percent Minority Population	20.29	15.90	10.10
Percent Nuclear Households	79.54	84.80	88.24

High migration counties can be seen as having characteristics consistent with areas of greater industrialization and urbanization. Mean values for the percentages employed in primary industry show that high migration counties have approximately one half of their workforce devoted to agriculture and resource production as do the moderate migration counties, and approximately one-fourth the percentage of counties with low migration totals (Table 10). Despite the higher percentage employed in the service and production sectors, the means for the percent employed are lower for high migration counties and the percent unemployed is higher as well, indicating that overall less of the population of high migration counties are active in the work force. The significance of minority population and the percent of nuclear households are not evident from mean values as their ranges are

approximately ten, meaning there are little variance between high, moderate, and low migration counties based upon these values.

TABLE 8

Summary of Discriminant Function Results[a]

	Function Coefficients
	Function 1[b]
Percent Employed in Primary Industry	1.560
Percent Employed in Secondary Industry	.577
Percent Seeking Employment	.023
Percent Employed	-.317
Percent Non-Agricultural Population	-.097
Percent Minority Population	-.136
Percent Nuclear Households	-.220
Other Values	-
Eigenvalue	1.865
% of Variance	98.20%
Canonical Correlation	.807
Wilks' Lambda	.338
Chi-square	2564.954

a. Function 2 was omitted from the table due to the low percentage of variance explained by it.

b. Percent Employed in Tertiary Industry was removed from the function due to a within-group variance of 54.942

The discriminant function analysis was dominated by the first function – 98.2% of the variance was explained. As was seen in many of the regression tables, employment in the primary sector of the economy was the dominant variable in the analysis.

TABLE 9
Results of County Group Classification[a]

Level of Migration			Predicted Group Membership			Total
			Low Migration	Moderate Migration	High Migration	
Original	Count	Low	1554	132	5	1691
		Moderate	122	284	94	500
		High	2	31	144	177
	%	Low	91.9	7.8	.3	100.0
		Moderate	24.4	56.8	18.8	100.0
		High	1.1	17.5	81.4	100.0

a. 83.7% of original grouped cases correctly classified.

The results of the group classification indicate that approximately 84% of the counties in China could be correctly classified into these three groups (High, Moderate, and Low migration) based upon the independent variables in the discriminant function. Low migration counties were the easiest to classify, with 92% correctly classified, and the high migration were classified correctly in 81% of the cases. These two groups are distinct from one another, as only one percent of high migration counties were classified as low, and only .3 percent of low counties were classified as high migration counties.

The major consideration in this classification process pertains to counties with moderate levels of migration. Roughly half of the moderate migration counties were misclassified in the analysis. One possibility for why the discriminant analysis had so much difficulty in correctly allocating the moderate counties is that the three groups were based upon three natural breaks in the data set. However, the weakness of this grouping is acceptable as the purpose of this analysis was not to create a method for the classification of Chinese counties, but to see if this independent variable set was able to explain the levels of migration within counties based upon natural breaks. As it correctly classified over eighty percent of the counties, this analysis was successful in illustrating the independent variables chosen for the analysis were indeed strongly related to the different scales of migration.

CHAPTER VI

RESULTS AND CONCLUSIONS

The analysis yielded various interesting results to be considered. Most consistent, and unsurprising was the continued negative relationship between percent employed in the primary industry sector and in-migration. It is well documented that the levels of migration into rural and agricultural areas of China have been falling, and it is no surprise that the level of employment in primary industry bore that out in the regressions. However, the relationship between tertiary and primary industry at both the intra-county and inter-county levels was unexpected.

The strong, positive relationship between the percentage of white collar and service sector jobs and in-migration at the local and intermediate scales could be indicators that the analysis is picking up mainly permanent migrants at these scales. The reason that this may indicate the census is picking up more permanent migrants, is that permanent migrants are mainly comprised of better educated, wealthier segments of the population, and as such they would be the ones attracted to counties with high percentages of their economies dedicated to white collar employment. It would also follow that permanent migrants would be more likely to make shorter distance moves in order to pursue economic interests. The *hukou* system is in many ways has become an elitist system centered round the urban centers of China, giving preference to those that are already within the cities, which is where many of the high tertiary sector employment areas are located.

This would mean that the counties with more white-collar and service jobs are drawing the permanent migrants that are located nearby. In addition, the secondary industry percentage has a higher positive relationship with inter-provincial migration, than tertiary. One reason for higher in-migration at the provincial level to counties with high percentages of secondary employment could be that the migrants being attracted to counties which have jobs that are more readily accessible to a wider range of skill levels. In which case, long-distance migration for that economic sector would make sense as the floating population is comprised mainly of persons from agricultural areas.

Another point of interest that brooks further study is the migration tendencies of other areas with high percentages of minority population. The effects of this variable were not overly pronounced, but it was strongly related at the provincial scale, and in general it had a positive relationship with in-migration at other scales. However, an avenue for further study lies in the negative relationship at the intra-county, or local level. This is the only scale at which there was a negative relationship between migration and percentage of minorities, and the negative relationship here is more pronounced than the positive ones at the inter-county and Percent Migrant scales. It is feasible that this switch at this one scale indicates that there is little migration within ethnic areas at the local level. One possible suggestion is that this is due to the presence of ethnic enclaves, which lessen the amount of mobility within the counties with high levels of ethnic minorities, and that when people are moving into counties with high percentages of minorities, they do not then move often at the local level.

This study was not without some shortcomings. Certain aspects of the migration process were overlooked as the selected variables were not completely comprehensive. Due to the unavailability of data, net migration was not included in the analysis. Only one major

inconsistency was present in the analysis, that is the negative relationship between the percent of non-agricultural population in a county, and the in-migration at the provincial scale. If this portion of the analysis is correct, then that would indicate that areas with higher levels of urbanization are less likely to be receiving migrants from outside their province. This is highly unlikely as recent trends in Chinese demographics and all common sense seem to suggest that more urbanized areas are more likely to receive migrants. There are only two possible explanations that come to mind, and neither is provable using only this data set. One explanation is that areas with higher percentages of urbanization are harder to move into due to more rigid controls on urban registration meaning that those areas are actually barriers to immigration. The other being that depending upon the type of land classification, the most non-agricultural counties might be those in which there is large-scale industrialization, but little to no room for residential areas, meaning that those moving in from a distance would find it more difficult to locate housing.

Despite the mixed messages from the non-agricultural variable, the analysis was able on the whole to provide clear, consistent results, and a few opportunities for future research (especially on the effect of non-agricultural areas on in-migration). Signs of the increasing urbanization of China and migration were persistent throughout the analyses. In the broadest strokes, the patterns of migration in China during this time period can be said to trend towards more migrants to areas with greater economic opportunities, less to areas with more agriculture, and a somewhat curious inundation of minority areas with long-distance migrants coupled with a dampening effect on the local migration therein.

LITERATURE CITED

Chen, Pi-chao. "Overurbanization, Rustication of Urban-Educated Youths, and Politics of Rural Transformation: The Case of China." *Comparative Politics* 4 (1972): pp. 361-386.

Cheng, Tiejun and Mark Selden. "The Origins and Social Consequences of China's Hukou System." *The China Quarterly* (1994): pp. 644-668.

China Population Information Center. *Analysis of China's National One-per-thousand-Population Fertility Sampling Survey.* 1994.

Dreyer, June. "Go West Young Han: The Hsia Fang Movement to China's Minority Areas." *Pacific Affairs* Vol. 48 (Autumn, 1975): pp. 353-369.

Fan, C. Cindy. "The Elite, the Natives, and the Outsiders: Migration and Labor Market Segmentation in Urban China." *Annals of the Association of American Geographers* Vol. 92 (2002): pp. 103-124.

Fischer, Andrew. ""Population Invasion" versus Urban Exclusion in the Tibetan Areas of Western China." *Population and Development Review* Vol. 34 (Dec. 2008): pp. 631-662.

Guo, Fei and Robyn Iredale. "The Impact of Hokuo Status on Migrants' Employment Findings from the 1997 Beijing Migrant Census." *International Migration Review* Vol. 38 (Summer, 2004): pp. 709-731.

Han, Dongping. "The Hukou System and China's Rural Development." *The Journal of Developing Areas* Vol. 33 (Spring, 1999): pp. 355-378.

Howell, Anthony and C. Cindy Fan. "Migration and Inequality in Xinjiang: A Survey of Han and Uyghur Migrants in Urumqi." *Eurasian Geography and Economics* Vol. 52 (2011): pp. 119-139.

a) Lavely, William R., James Lee and Wang Feng. "Chinese Demography: The State of the Field." *The Journal of Asian Studies* Vol. 49 (Nov. 1990): pp. 807-34.

b) Lavely, William R., Zhenyu Xiao, Bohua Li and Ronald Freedman. "The Rise in Female Education in China: National and Regional Patterns." *The China Quarterly* Vol. 121 (1990): pp. 61-93.

Lee, James, Cameron Campbell and Guofu Tan. "1772-1873 jian Fengtian diqu liangjia yu renkou bianhua" {Grain prices and population chance in rural Liaoning 1772-1873}. *The Second Conference on Modern Chinese Economic History* (1989): pp. 511-542.

Lee, James, Cameron Campbell, and Christoper Myers. *Fate and Fortune in Rural China: Social Organization and Population Behavior in Liaoning 1774-1873*. Cambridge University Press, 1990.

Lee, James, Wang Feng and Cameron Campbell. "Infant and Child Mortality Among the Qing Nobility: Implications for Two Types of Positive Check." *Population Studies* Vol. 48 (1994): PP. 395-411.

Leridon, Henri. *Human Fertility: The Basic Components*. Chicago and London: The University of Chicago Press, 1977.

Liang, Zai. "The Age of Migration in China." *Population and Development Review* Vol. 27 (Sep., 2001): pp. 499-524.

Liang, Zai and Zhongdong Ma. "China's Floating Population: New Evidence from the 2000 Census." *Population and Development Review* Vol. 30 (Sep., 2004)): pp. 467-488.

Mallory, Walter. "The Northward Migration of the Chinese." *Foreign Affairs* Vol. 7 (1928): pp. 72-82.

Peng, Xizhe. "Demographic Consequences of the Great Leap Forward." *Population and Development Review* 13 (1987): pp. 639-670.

Prybyla, Jan S. "Hsia-Fang: The Economics and Politics of Rustication in China." *Pacific Affairs* 48 (1975): pp. 153-172.

Wang, Fei-Ling. "Reformed Migration Control and New Targeted People: China's Hukou System in the 2000s." *The China Quarterly* No. 177 (Mar., 2004): pp. 115-132.

Yang, Xiushi and Fei Guo. "Gender Differences in Determinants of Temporary Labor Migration in China: A Multilevel Analysis." *International Migration Review* Vol. 33 (Winter, 1999): pp. 929-953.

Zhang, Li. "Migration and Privitization of Space and Power in Late Socialist China." *American Ethnologist* Vol. 28 (Feb., 2001): pp. 179-205.

VITA

Nicholas X. Quincy was born in Dallas, Texas, on October 14, 1987. He entered Texas State University-San Marcos in 2005. He received a Bachelor of Arts, and a Bachelor of Arts International Studies from Texas State in May 2009. In August 2009, he entered the Graduate College of Texas State to pursue a Master of Arts.

Permanent Email Address: nxquincy@gmail.com

This thesis was typed by Nicholas X. Quincy.