

**Inter-provincial Migration in China in the Post-1949 Era:  
Types, Spatial Patterns, and Comparisons**

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**Comments are Welcome!**

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## Introduction

Historical experience has shown that migration is an important integral process of development of a modern economy and society. While the significant rise in population mobility in the post-Mao China has spurred a flurry of studies, our knowledge of internal migration in the PRC in the pre-1980 era remains sketchy. Current attention of Western scholarship on China has mostly focused on the post-Mao era. Studies of the pre-reform era are largely limited to rural-urban migration at the aggregate national level, rustication movements based mainly on journalistic accounts of selected locales, or only officially sanctioned migrations (Chan 1988; Bernstein 1977; Ma 1987; Cheng 1991). This has restricted our understanding of the long-term change of the Chinese population and its distribution. At the same time, not too surprisingly, as migration is arguably the most complex demographic variable (Skeldon 1990), existing studies of Chinese migration, as with the study of urbanization, is plagued by problems related to definitional and boundary complexities.<sup>1</sup>

This paper focuses primarily on inter-provincial migration (IPM), i.e. migration between provincial-level administrative units (hereafter referred to as "provinces") in the PRC (or mainland China). IPM, in the context of China, can be assumed to be long-distance population flows. The current attention in China to "mingong chao" (waves of rural labor exodus), especially cross-province rural outflows, underlies the special significance of long-distance population movements. Though IPM contributes, as expected, to only a small portion of all migration, IPM is far more important than within-province migration in redistributing population and in redressing regional disparities. Owing to the long distances involved, IPM is also more clearly and easily distinguishable because frequent commuting, the differentiation of which from genuine "migration" is often problematic in studying short-distance moves, is not an option for most inter-provincial (IP) migrants. It is, however, feasible to have yearly, if not monthly, long-distance "circulations". In the post-1949 era, long-distance migration is predominantly employment driven, whether initiated by the government or by individuals. IPM thus can be seen as the adjustments of population (labor and families) to the changes in the regional economies. Long-distance migration tends to be more lasting and, therefore, have greater impacts, because it is costly to initiate. And once initiated, it is

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<sup>1</sup> Some of the major problems are reviewed in Yang and Chan (1993), Chan (1994a; 1996a).

likely as costly to reverse. Long distance moves are expensive not only because of the transportation costs, but also because, as Zelinsky (1971) has noted, they strain or rupture previous social bonds. While IPM is often used as one indicator of societal mobility -- rising as society modernizes (in peaceful time) -- it should be emphasized that high rates of IPM could also be the outcomes of serious social and economic dislocations, as in times of famines and wars.

The main objective of this paper is to document the spatial, and, to a less extent, temporal patterns of IPM in the last 40-plus years. The tasks appear to be deceptively simple, but as there are no nationwide migration statistics pertaining to the pre-1982 era, establishing any quantitative basis becomes a not-so-simple job, to be further complicated by all the familiar problems that come with studying migration (see Long 1988). Our project here involves first generating a set of IPM estimates for the pre-1982 period. As will be made clear in the next section, the existing pre-1982 "official" migration statistics have serious problems and undercount significantly the actual flows. The estimates are then used to produce a series of tables and maps showing net migration or flows in different times. Our research on IPM points to two different situations in the reform and pre-reform eras. Taking into account migratory patterns observed elsewhere, we make some broad generalizations about the two different migration regimes in the post-1949 period and hypothesize their underlying factors. This paper hopes to contribute to a better understanding and theorization of Chinese migration through a study of regional population change over a long period of time.

### **Definitions and Types of Migrants**

It is imperative to define terms precisely as definition of most Chinese migration (and many other) statistics do not adhere to international practice, and to set up classification of migration flows that are meaningful in the more "unique" Chinese context. Migration represents moves with an intention to establish (relatively) permanent residences in the destination place. Statistically, this is often defined by the length of stay (say, 6 months or 1 year in the destination place). Migration is thus different from "circulation" and commuting and other forms of temporary movements. In other words, sojourners, commuters and other short-term migrants are excluded from the migration counts although some short-term migrants may change their intents and later become "permanent" migrants/residents. As will be made clear below, a substantial portion of what is often referred to in

the Chinese literature as "temporary" or "floating" population is in fact not really temporary population as we commonly understand it. Though many researchers continue to use the term "temporary migration" to describe those moves, they in fact should be counted as permanent migrants.

An informative categorization scheme of migration requires taking into consideration explicitly the impact of the state intervention in the Chinese context. While China has adopted an central planning system for its economy, not everything is -- in fact, not everything could be -- planned by the government. This is also true of population. Existing literature has differentiated "planned" migration from "unplanned" one, "free" flows from "forced" ones, and so on. However, most of these categorizations are neither totally satisfactory nor adequate for our analysis. Following the framework used in Gu (1991), Chan (1994b), Yang (1994) and especially Chan (1996a), this paper uses a scheme that references migrants to their local household registration (hukou) status. The hukou system is a very powerful mechanism that used to determine where one could live and work and still heavily shapes where one can live and work today (Mallee 1988; Cheng and Selden 1994). Because of the paramount importance of the hukou, population flows in China are most useful for analytical purpose classified along this hukou line:

(a) migration with local residency rights (hereafter, hukou migration); (b) migration without hukou (non-hukou migration); and (c) short-term movements (visiting, circulation, and commuting).

In the PRC, officially, only hukou migration is considered as qianyi ("migration"); the rest is merely renkou liudong (population movements or "floating"). The latter, therefore, is called liudong renkou ("floating population") in the PRC. The term implies an expected temporariness; the transients are not supposed to (and legally should not) stay in the destination permanently (and that is why they are termed as "temporary" migrants by some observers). They are not the de jure residents, but many of them stay for years. Hukou migration, on the other hand, is met with state-supplied resources and, in the socialist parlance, the "within-plan" migration (jihua qianyi). These two types of migration not only reflect the differing degree of government intervention in the migration process, but also underlie the different opportunities and constraints one face in the migration process (see Christiansen 1990; Chan 1994b; Solinger 1995).

In China hukou migration is primarily driven by employment, especially in the pre-reform era. This would include direct labor migration and its derivatives (see below). The labor migration is mostly initiated by the state in accordance with national and regional economic and laborforce plans. Under socialist planning, the labor or production aspect of human beings is emphasized. In an extreme case, people are treated merely as one of the inputs of production and is subject to the disposal of the planner. In practice, however, not all hukou labor migration is totally coercive: in most cases, there is some degree of concurrence of wishes between the individual and the state. The important feature of hukou migration to note is that there is a heavy and direct state involvement in the migration decision: the state not only initiates the move but also determines the destination and identifies the prospective migrant. The derivative migrants include those moving for work training (including higher education), family members of work migrants, and retirees (usually return to their home provinces). Some of these are initiated by the state; many, by the individuals. In any case, a large portion of it is regulated by government's population plans of various kinds. Truly coercive flows are those associated with political campaigns. Purges such as the Anti-rightist Movements and those in the Cultural Revolution in the past produced millions of "rightists", "anti-revolutionaries" and "capitalist roaders", whom were often banished to land afar in the border or in the mountain provinces, forming major inter-provincial flows. Hukou migration in China since 1949 involved predominantly urban residents because they (as "non-agricultural" population) belong to the state sector and is subject to the direct control of the government (see Chan and Tsui 1992).

While the heavy involvement of the state in the various aspects of the society and the stringency of migration controls, especially under Mao, is well known, it is a mistaken view to presume that the volume of "free" migration, even in the Maoist era, was minuscule or insignificant.<sup>2</sup> Non-hukou migrants are China's "free" movers, people who move on their own initiatives, sometimes in defiance of the state's laws and objectives, but more often, tolerated by the state. Non-hukou migrants are the "ziliu renkou" (self-flowing population) outside state (economic) plans. In the eyes

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<sup>2</sup> One may note that the freedom to migrate was written as a freedom of the citizen in the first Constitution promulgated in 1954 (Constitution of the PRC, 1954). This provision has not appeared in the Constitution since its 1975 version.

of many central planners, this type of movements is "anarchical" and "chaotic" that, rightly, defies any planning. That is why it is often derogatorily termed as mangliu (blind flows) in the officially-controlled media in China. Of course, ziliu renkou does not really flow freely in China; even in Western "free" society, migration is subject to a number of indirect, mostly economic, constraints.<sup>3</sup> Needless to say, in China non-hukou migrants face even greater socio-economic and political constraints. Still, the important feature of non-hukou migration is that it is largely voluntary, initiated by the migrants themselves, who often have some freedom in deciding the moves and choosing the destinations. As non-hukou migration is not officially sanctioned, migrants, even though having stayed in a destination for years, are often not given the local hukou status and are confusingly classified as "temporary" population. Whatever labels they may carry, as the Chinese socialist experience suggests, even under Mao when migration controls were stringent, the fact is, this type of "extra-plan" flows of "self-floating population" had its contribution to development. They filled labor deficits in certain provinces and were welcomed, at times, by local governments.

### **Evaluation of Data Sources**

At present there are two bodies of relatively complete migration data generated by the 1987 1% Population Sample Survey and 1990 Population Census that can be readily used for a systematic study of IPM for the period between 1982 and 1990. However, there is no comprehensive direct information about migration in the pre-1982 period. Instead, estimates will have to be made. Information on IPM can be drawn from four major sources:

(a) Household registration statistics: The Chinese laws requires that any person making a change in his/her residence seek clearance from the household registration authority. Theoretically, this seemingly strict system would produce a relatively good count of migrants for the nation over the years in the files in the Ministry of Public Security. In fact, annual migration statistics organized along that line are available for most of the provinces for all the years except 1966-71, due to disruptions in the early years of the Cultural Revolution (SSB and Ministry of Public Security, 1988). Unfortunately, this set of migration statistics suffers from several major shortcomings, more

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<sup>3</sup> Of course, migration to and from one country, even within the Western world, is heavily regulated by the state.

than those commonly found by Clark (1986) and Daroczi (1989) for other countries.

First, although theoretically all people had to report their change of residence, a large number of non-hukou migrants or "unofficial" migrants especially from the rural areas, by its very nature, totally fell outside the purview of the system. Secondly, even for hukou migrants, out-migrants often failed to report their departures to the local household registration authorities, especially in times of famines or other social distress. Moreover, a significant number of people, who began their moves temporarily eventually stayed permanently and did not reported back to the authorities at the origin places. There is also evidence that in the 1970s and 1980s, some local officials facing strong pressures to meet birth control targets, manipulated registration statistics so that newborns appeared as in-migrants. Hence, the usefulness of this source of information in depicting migration flows is very questionable. To illustrate, while one expects the national net IPM volume (i.e. aggregating all net provincial IPM figures) to be a small negative figure, reflecting the very small net emigration from mainland China,<sup>4</sup> the reality is, this set of migration figures shows rather substantial surpluses. For instance, the national net IPM for 1953-64 is 7.5 million and for 1964-82 is 13 million (Table 1, Cols. 1 and 2), which are totally out of the line. At best, this set of figures can be used to show only hukou migration, instead of the total migration, as is done by Cheng (1991).

(b) Regular vital statistics: Annual implied net IPM can also be theoretically generated from regular vital statistics, namely, by comparing the actual provincial population totals and the expected ones based on the reported natural increase rates (survival rations). However, as is elsewhere documented, the Chinese official vital statistics suffer from a serious problem of underreporting (Coale 1984). Fortunately, the undercounting of births and death tends to offset each other resulting in smaller errors when it comes to estimating implied net migration and has partially eased the estimation problem. Coale (1984) has also produced annual estimates of the degree of underreporting in the Chinese vital statistics that can be used to adjust the existing figures.

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<sup>4</sup> China lost about 1-2 million population through emigration to Hong Kong and Macau since 1949. Major waves of emigration (both legal and illegal) to Hong Kong took place in the 1950s, early 1960s and the late 1970s. In the early 1990s, Hong Kong accepted 75 legal immigrants from mainland China daily. This was raised to 105 and further to 150 in July 1995 (South China Morning Post 1996). China probably gained about 1 million people from Indonesia during the 1950s when there were anti-Chinese riots in Indonesia.

(c) Censuses: As mentioned before, the first three censuses carried out since 1953 have no direct information on migration, but they do contain acceptable provincial population totals. The numbers are useful in estimating the implied net IPM. In addition, the 1982 census contains some indirect information about temporary migration. Direct information on migration nationwide is available only from the 1987 Survey and the 1990 Census (SSB 1988; State Council and SSB 1993). They contain migration figures within the five-year intervals of 1982-87 and 1985-90 for the population aged 5 and above. The 1982-87 data can also be broken down into annual figures (see also Goldstein and Goldstein 1993).

(d) Other sources: In addition to the more regular sources described above, there is a growing number of occasional, ad hoc studies on migration commissioned by various government departments and research institutes in the 1980s. Especially useful for migration study are the migration survey of 74 cities and towns conducted in 1986 (CASS 1989), a study of "floating population" in eight major cities in 1990 (Li and Hu 1991), more recent survey of rural labor outflows (such as Li and Han 1994; Zhang 1995), and monographs on migration in China by Tian and Lin (1986), Shi (1990), Shen and Tong (1992), and Yang (1994). These works provide not only some specific information about migration in the 1980s but often details of the past.

### **Methods and Findings**

An inter-provincial migrant is defined as one who has crossed a provincial boundary within a specified period and who, ideally, have stayed in the destination place for a substantial period of time. In this paper information on IPM in the period between 1982 and 1990 is directly drawn from the 1987 1% Survey and the 1990 Census. In the 1987 Survey a migrant is one who had moved to a destination between mid-1982 and mid-1987 and had stayed in the destination place for at least six months. This period of stay was increased to one year in the 1990 Census, covering 1985-90. These two sources form the basis for constructing IPM origin-destination matrices, in- and out-migration, as well as net migration at the provincial level in the 1980s.

Owing to the data constraints, studies of IPM in the pre-1982 era have to be confined to analysis of net IPM estimates, which have been generated by the vital statistics method described below (see also Yang 1989; Yang and Chan 1993). First, the provincial population totals between 1954 and



1982 described in (b) above were adjusted to bring in line with the relatively accurate population counts in the first three censuses starting from 1953. Then, vital information in the household registration statistics was adjusted by national birth and death underreporting percentages derived by Coale (1984) for all the provinces except the three independent municipalities, which, we believe, had maintained reasonably accurate vital statistics (see Table 1, Cols. 3 and 4). All figures were further adjusted for boundary changes based on county population data in the first three censuses so that provincial figures are all tabulated in accordance with the provincial boundaries of 1982. Secondly, with relatively reasonable provincial population bases, a set of implied net IPM figures for all the provinces were produced. Thirdly, these IPM estimates were further checked against information reported in the provincial series of Zhongguo Renkou (Population of China), and Shi (1991). Some minor adjustments are then made to a handful of provinces,<sup>5</sup> leading to the final set of annual estimates of net IPM for the whole period of 1955-82, a summary of which is in Table 2. Table 3 reports without adjustments the results based on the 1987 Survey and 1990 Census.

While we are aware that the estimates for 1955-82 derived from the above method may not be entirely satisfactory and there are some small unresolved discrepancies,<sup>6</sup> the numbers are reasonable for the present purpose of studying the broad geographical patterns of IP mobility in China. To illustrate, the aggregate balances of all the IPM (i.e. the column totals in Table 2) for all the periods - which can be interpreted as the "implied net international migration" - are shown to be very small for most years except 1977-79, consistent with the reality we know (Table 2). In fact, none of the individual estimated annual national net IPM figures exceeds (+ or -) 30,000 either except 1957. The way we come up with these IP estimates also necessarily include (the small volumes of) international migration from the provinces. Guangdong, the province known to have substantial emigration in the late 1950s and early 1960s, and the 1970s, also registered significant negative net migration in those periods. This is consistent with what is expected.

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<sup>5</sup> For example, the net IPM figure for Liaoning has been adjusted upward.

<sup>6</sup> Mainly because we have used nationwide underreporting estimates for individual provinces.

Obviously, net migration, the balance of in-migration and out-migration, is less informative than the inflows and outflows themselves for net migration simplifies a two-way flow into a single-way one. Nevertheless, net migration still tells the impact of the inflows and outflows, revealing of the directions of government's intentions in the case of hukou migration and the comparative attractiveness of the provinces to non-hukou migration.

Finally, owing to the original data setup, IP migrants referred to in this paper in different periods cannot follow exactly the same definition, especially in the length of their stay in the destinations. As pointed out previously, those reported in the 1982-87 period had stayed in the destination place for at least six months while those in the 1985-90 period, one year (Table 3). Those two sources, following international practice, report only migrants aged 5 and above. For those prior to 1982, we have only net migration estimates for all ages, but "net migrants", of course, do not truly exist. The precise period of stay in the net IPM estimates for 1955-1982, therefore, cannot be determined. However, given the way how China reported the provincial population counts, it is almost certain that the 1955-82 IPM estimates will also exclude short-term visitors and circulators, as was generally the case in 1982-90 figures used here.

### **Analysis of Spatial Patterns**

#### 1949-82:

Precise estimation of the IPM in the early years of the People's Republic cannot be made due to the lack of accurate provincial population data prior to the 1953 Census. Despite that, it is known that substantial inter-provincial flows of population were engendered due to the political and economic re-organization in that period. In 1949 and 1950, for example, a large number of soldiers and officials of the former government in Nanjing were deported to Shandong and Anhui, where these people originally came from. In many big cities such as Shanghai and Beijing, there were also campaigns to clear out vagrants and people (e.g. ex-prostitutes) who lost their jobs because of the political change. When stability returned in 1951, many people from the countryside returned to Shanghai. Registration records indicate that Shanghai received about 900,000 people in net terms between 1951 and 1954 (Zhang 1989).

The second half of the 1950s and the early 1960s, as our estimates in Table 2 display, was clearly a period of very active migration flows between provinces. Figure 1(a) shows that in the period between 1955 and 1965, sparsely populated provinces in the border regions were net recipients of migrants while most of the densely populated provinces on the coast and central regions were net exporters. The famines in the early 1960s also accentuated the intensity of flows. Among the border provinces, Heilongjiang, Nei Mongol and Xinjiang were the largest net recipients, with each receiving from 1.3-3.8 million people in net terms in the period. Principal exporters were concentrated in North China (Anhui, Shandong and Henan), plus Shanghai and Sichuan, with each losing 1.6 to 3.8 million population to migration.

In 1966-82, while the intensity of IPM was significantly reduced, Figure 1(b) displays a geographical pattern of net migration during the Cultural Revolution decade (1966-76) broadly similar to the period before, i.e. from the coast to inland. The difference is that central provinces such as Henan and Anhui changed from being major net exporters in 1955-65 to being small net importers in 1966-76. Shandong and Shanghai persisted to be major exporters while Heilongjiang and Xinjiang continued to absorb voluminous migrants in net terms.

These net migration figures have necessarily masked much greater complexity of the IP migratory flows. Existing numerical data, however, do not allow us to map precisely the flows in the pre-1982 era. Nonetheless, synthesizing descriptive accounts elsewhere, notably Shi (1990), we have constructed approximate major flows in Figures 1(a) and (b) to capture some degree of this complexity. These arrows illustrate, in some cases, the multiple linkages of a destination province to a number of origin provinces. For instance, Shanghai sent out people to many different provinces to different periods. Xinjiang also got its in-migrants from a variety of provinces far and near. To differentiate the streams of long-distance migrants, often of different nature, in the pre-1982 period, the following uses our earlier classification to provide some descriptions:

(1) Urbanward hukou migrations: These were significant during the 1950s and the 1960s, primarily resulting from the programs launched at different times to develop new industrial bases. In the First Five-year Plan (1953-57) period, the major destinations were the Northeast, Northwest and North China. In the 1960s and the early 1970s, while Heilongjiang continued to be an important migration destination, other major destinations of organized migrants had shifted to

Southwest and Central China. To illustrate, Heilongjiang, the province receiving the largest estimated net flows in the period 1955-82 as a whole gained a total of 2.3 million of engineers, cadres, and skilled workers and their dependents in the period 1953-64 through its industrial development program centered initially on Harbin and, later, on Daqing. Most of these migrants came from Shandong, Henan and Hebei. Indeed, Heilongjiang continued to receive large numbers of industrial migrants even in the 1960s because of the discovery of large oil fields in Daqing. Similar types of transfers of industrial personnel also took place between coastal provinces and new industrial bases in Liaoning (Anshan), Nei Mongol (Baotou), and Shaanxi (Xian) in the 1950s, especially during the First Five-Year Plan period.

The Third Front industrialization program, coinciding roughly the Cultural Revolution decade in time, had also significant impacts on the geography of IPM. Although political purges had played a role (examined below), it is believed that this industrial development program was instrumental in bringing a sizeable volume of people to the Third Front region in 1966-76. All the provinces except Yunnan within the Third Front region had experienced significantly larger inflows of population than in the previous period of 1955-65. These provinces include Guizhou, Shaanxi, Hubei and Hunan. Indeed, Hubei and Hunan changed from being net exporters of population in the previous period to being net importers in 1966-76.

(2) Rural resettlement programs: The government also organized in the 1950s and 1960s transfers of large numbers of hukou migrants over long distances to rural areas in less densely populated region based on economic and political considerations. There are two types of rural resettlement. The first type of transfers aimed at opening up new land for agriculture and garrison the frontier region. This involved both demobilized military personnel and civilians. State farms and later, "production construction crops" organized along military lines were set up in the 1950s in Heilongjiang, Nei Mongol and Xinjiang, using demobilized soldiers from central and coastal China. The call to open up the "beidahuang" area also sent many people heading to Heilongjiang.

Migrants to Qinghai were largely civilians, organized by the Qinghai Resettlement and Reclamation Bureau set up in 1956. The first group, totalling 13,702 families (69,728 people) from Henan, Hebei, Anhui and Shangdong, was resettled in eight counties in Qinghai. 29 youth farms were later set up in 1959 to take 44,293 youths from Henan. Long-distance migration to Qinghai,

including some demobilized soldiers, continued throughout the 1960s and 1970s. These civilian inflows were organized into state farms along military lines. Still, there were people who were relocated in the countryside due to large-scale reservoir projects such as those at Xinanjiang, Danjiangkou and Sanmenxia. Out of the 280,000 people resettled due to the construction of the Sanmenxia Dam, about 100,000 of them were moved to Ningxia. Generally, resettlement programs due to the water projects have so far been not successful in China. The affected population was generally not fairly compensated, and many of them found it difficult to re-establish their means of livelihood in the new locations (Tian 1986). It would be interesting to see if the resettlement program of the Three Gorges Dam, the largest of its kind in the world, will break from the past pattern.

While the above transfers were largely economically motivated -- at least from the planners' point of view, the second type of hukou rural-bound transfers resulted largely from political purges such as the Anti-rightist Movement in 1958 and the Cultural Revolution (CR), although some of flows were initiated to deal with crises of a primarily economic nature. Most well known of all is the urban youth rustication movement (shangshan xiaxiang) during the Cultural Revolution decade, which involved some 20 million young people. This resettlement program was launched initially as a means of accommodating the unemployed youths caused by closures of colleges and most enterprises in cities in 1968 and 1969. The program was later institutionalized as a reeducation program for urban youths ("to learn from the peasants") and continued through the mid-1970s even when urban unemployment was no longer a major problem. A large portion of the urban youths were resettled in the countryside in their own provinces but those in Shanghai, Beijing and Tianjin were sent to Xinjiang, Heilongjiang, and Yunnan. Lesser in scale in the same period was the xiafang (sending down) movement targeting mainly at urban intellectuals and cadres, who were transferred to the so-called "May 7th" cadres schools in the countryside to participate in labor work. The central bureaucracies in Beijing, for example, set up 106 cadres schools in Hunan, Hebei, Jiangxi, Ningxia and other provinces and resettled about 100,000 people from Beijing (Shi 1990).

In Chinese history long-distance banishments to remote places were used as a punishment for dismissed officials. This was used by Mao against political dissents and purged officials. Two major waves of "banishments" took place in the aftermath of the Anti-rightist Movement in 1958

and during the CR, respectively. About 400,000 intellectuals were identified as "rightists" during the 1958 campaign and most of them were deported to far off places, some never returned. Deng Xiaoping was also a victim of the CR and was banished with his family to Jiangxi, about 1,500 km away from Beijing; he survived the CR to become China's paramount leader in the post-Mao era. Majority of these migrants "exiled" on political reasons eventually returned to their original places in the late 1970s when the political climate changed, generating significant reverse IP flows, especially in the late 1970s.

(3) Non-hukou migration: Because of its unorganized nature, systematic information about the sizes of the "spontaneous" migrants in the pre-1982 period are not available. We have estimated the size of this category of migrations crossing provincial boundaries in the pre-1982 era to be in the order of 12-15 millions; Ma (1987, p.5) puts the number at "over 10 million". These were largely peasants. A rough estimation indicates that the national volume of IPM (i.e. the total number of out-of-province migrants) in the 1955-82 era was in the range of 45-50 millions.<sup>7</sup> This would imply that non-hukou migration accounted for about one quarter of the all the IP moves in the 1955-82 period. In the two major migrant recipient provinces, Heilongjiang and Xinjiang, had more non-hukou migrants from other provinces than hukou migrants in the pre-1980 period. Heilongjiang received about 4 to 5 millions non-hukou migrants from outside between 1949 and 1979 (Shi 1990), out of a total in-migration<sup>8</sup> of about 6 millions between 1955-82 (Table 2). Against a total of 2-3 million in-migration to Xinjiang between 1955 and 1982, non-hukou migrants most likely numbered about 1.5 millions. Other major recipients of unorganized migrants include Nei Mongol, Jiangxi, Yunnan and Hubei. Major provinces furnishing non-hukou migrants were Sichuan, Shandong, Henan, and Zhejiang.

Non-hukou migration in the Maoist period, even over long distances, was largely confined to the rural sector, mainly because, unlike most developing countries, the option of moving to urban centers largely did not exist in China. Non-hukou migration tends to follow the agricultural

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<sup>7</sup> Zhang (1990) suggests that "over the last 40 years the total number of inter-provincial migrants is about 40 millions" (p.7).

<sup>8</sup> This figure is based on net IPM to Heilongjiang. The flows to the province were predominantly one way prior to 1982 (see Table 2).

population density gradient, from provinces with unfavorable population-land ratio to those of favorable ones. Most of the flows in fact trailed the traditional paths of their predecessors in the recent past centuries in search of new land for cultivation, as population pressure in the inland provinces grew. These routes linked Shandong with the Northeast, and Sichuan with Yunnan, Guizhou and Qinghai. In essence, these flows in the Maoist era were a continuation of the pre-1949 migratory patterns of agricultural migration from the already densely inhabited provinces in search of new farming opportunity.

This self-initiated migratory process takes place continuously in normal, peaceful circumstances but often intensifies in times of instability caused by political events or natural disasters. One prime example was the massive out-migration in the provinces badly hit by the great famines in the wake of the Great Leap Forward (GLF). Most of these provinces had high death rates as well as large net outflows of population during 1958-60. Our estimates indicate that, for instance, Anhui and Sichuan, two of the provinces devastated by the famine, lost close to 5 million people to out-migration in the three years of 1959, 1960 and 1961. Most of the people went to neighboring provinces. At other times, as in 1954, because of the flood in North China, about a million people reportedly fled from Shandong to Nei Mongol.

#### 1982-90:

After all the chaotic years of having millions of people going "up and down to the mountains and villages," with majority of them eventually returning to their original place, large-scale long-distance resettlements organized by the state were halt in the 1980s. IPM was probably at its lowest point in the early 1980s when stability returned. But then when the situation started to change again as the Chinese economy opened up and as migration policies became more flexible, people were again on the move. This time, the opportunity structures and constraints were different, and the pattern was different. Data from the 1987 Population Survey suggest that the annual national IPM rate<sup>9</sup> was only 0.8 per 1000 in mid-1982 to mid-1983, but rapidly rose to 1.3 in

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<sup>9</sup> This refers to the total number of population living in a different province a year ago, expressed as a ratio of 1000 population.

1984/5 and 1.7 in 1985/6 (Yang 1994). Estimates from the 1990 Census suggest an even higher rate, averaging annually 2.0 per 1000 for 1985-90 (Yang 1994, p.118). This indicates a clear upward trend in IP mobility level, as is suggested by Liang and White (1993). However, even at the rate of 1985-90, it is still only a fraction of the rate of the USA, a country with almost the same size.<sup>10</sup>

The geographical pattern of IPM in the period of 1982-90 was almost a complete reversal of the pre-reform pattern (Table 3 and Figure 1 (c)).<sup>11</sup> Most of the previous net migration recipients and exporters swapped their positions in the 1980s. In fact, Heilongjiang, which used to be a large importer, was the largest exporter in 1982-87; Guangdong also became a major importer. This pattern began to take shape in the period 1982-87 and intensified in the period 1985-90. In net terms, all recipient provinces in 1982-87 were in the coastal region with only two minor exceptions, Ningxia and Hubei. These coastal provinces were concentrated in North China (Beijing, Hebei, Shandong and Tianjin), Lower Changjiang Delta (Shanghai and Jiangsu), and Guangdong, while net exporters tended to be more scattered spatially (19 out of the 29 provinces) with Heilongjiang, Hunan, Guangxi, and Zhejiang being the largest three. This pattern suggests that IPM, looking at this very aggregate level, was responsive to the regional economic disparities. This is supported by the relatively high correlation coefficient (0.75) of provincial net IPM in 1982-87 and provincial per capita output in 1986.

A similar macro spatial structure of flows was also revealed by the 1990 Census, which reported migration in 1985-90 using a narrower definition of migrants, requiring most of whom to have stayed at least one year, instead of 6 months, in the destination place. Despite this, the volume of 5-year period IPM in 1985-90 (11.1 millions) is still 75% more than in 1982-87 (6.3 millions).

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<sup>10</sup> International comparisons of long-distance migration rates are hard, if not impossible, because of definitional, size and boundary complexities. The USA, which has the same areal size as China, has 50 first-level subnational units while mainland China had only 29 (before 1988). From this, one can establish that the USA equivalent of China's annual national IP in-migration rate would be somewhere between the annual migration rate between four macro-regions (15 per 1000) and that between the 50 different states (29 per 1000) (US Bureau of Census 1991). Even we take 20 per 1000 for the USA rate, it is about 10 times of China's. The national five-year period IPM rate for mainland China in 1985-90 was 9.2 per 1000; the national five-year period rate for inter-state migration in the USA was consistently around 93-99 per 1000 (see Long 1988).

<sup>11</sup> A map of IPM in 1982-87 is in Taubmann (1991).



This implies a significant rise in long-distance geographical mobility in the second half of the 1980s. In net terms, the provinces that gained most in 1985-90 were all in the coastal region, namely, Guangdong (net IPM = 1.00 million), followed by Beijing (0.54 million), Shanghai (0.53 million) and Jiangsu (0.17 million). Indeed, for every ten in-migrants in mainland China in the second half of the 1980s, one ended up being in Guangdong (see also Fan 1996). On the export side, Sichuan replaced Heilongjiang as the largest single net exporter (1.3 million), followed by Guangxi (0.39 million) and Zhejiang (0.30 million). Heilongjiang (0.26 million) dropped to the fourth place.

An examination of the maps showing the largest 30 IP streams of different types in Figure 2 reveals several salient features:

(1) About two-thirds of the flows are between nearby provinces, indicating that shorter-distance flows still prevailed in IPM, as Ravenstein (1885) long ago had observed. The three largest migration destinations, Guangdong, Shanghai, and Beijing all relied on regional migrant markets, rather than national markets (Figure 2(a)). There were sizeable two-way flows between a number of pairs of provinces. Most noticeable are provinces fairly close together, such as the three provinces in the Northeast; Anhui and Jiangsu; and Shandong and Northeast provinces. Of course, two-thirds of all internal migration in 1985-90 still took place within provinces (State Council and SSB 1993).

(2) There are also a number of flows crossing modest distances, notably, between Heilongjiang and Shandong, from Jilin to Shandong, from Sichuan to Guangdong, to long ones such as from Sichuan to Xinjiang and to Jiangsu. These flows reflect many historical migration linkages and traditions (such as those between the Northeast and Shandong) and the important role of regionally based community networks in migration. The most populous province, Sichuan has long been a major labor exporting province in its recent history, and its migrants have spread all over many provinces in the country in large quantity. In fact, the volume of out-migration from Sichuan greatly increased between 1982 and 1990.

(3) The 1990 Census also reveals that there were significant changes in the mix of IP migrants. Non-hukou migration showed a significant increase in the share of internal migration from 31.0% in 1982-87 to 45.3% in 1985-90 (Yang 1994, p.173). The share of non-hukou migrants in IPM was even higher, at 54% in 1985-90 (Yang 1994, p.197). Among the IP migrants, it is clear

from Figure 2 (b) and (c) that not only non-hukou migrants moved over longer distances than hukou migrants did, but they appeared to be also more responsive to regional economic disparities. Most of them are rural labor displaced by the rising productivity in the countryside as a result of the reforms (Taylor and Banister 1991). They were overwhelmingly moving towards the coastal region, both to urban centers and rural areas. These destinations were where the expansion of non-agricultural employment, mostly in the town and village enterprises sector, proceeded at a high rate, due to traditional strengths (such as the Lower Changjiang Delta), and/or foreign investment (such as in Zhujiang River Delta and Special Economic Zones, including Hainan Island).

(4) While the flows were overwhelmingly eastward and toward the coastal region, the complete picture of inter-regional flows is more diverse. There are also some who moved from more to less economically differentiated areas so as to maximize their comparative advantages (Liu 1991). A "great army of Sichuan men" moved across the province's southern boundary into Guizhou to engage in petty artisan work and trade. Another great army of construction composed of peasants in Jiangsu also went as far as to the Northeast to build houses and factories. Zhejiang, Weizhou in particular, is known for its sojourning and mercantile tradition, also sent out millions of migrants in the 1980s and 1990s to set up businesses and marketing networks all over the country. The Zhejiang Village in Beijing is perhaps the most well-known migrant community and business center combined (Field interview 1995). There were also people who were attracted to the vast backyard of Western China. Xinjiang and Qinghai were actually small net IPM recipients in the second half of the 1980s. More recently, even the less favored places like Tibet are reportedly having large influxes of self-initiated Han Chinese traders and vendors (Newsweek 1995). All the above is part of the story of "mingong chao" or more generally known as floating population) that has grown to huge volumes and captured the national and international attention. Estimates by various sources indicate that there were 50-80 million rural migrant workers in the country in the last three years, and about 20 million of them worked in other provinces (see Chan 1996b).

### **Conclusion and Discussion: Two Regimes of Migration**

This paper has estimated and analyzed the IPM in the post-1949 era. Two types of migration, the hukou and non-hukou migrations, of different nature were first identified. By

synthesizing various sets of population data, we have provided a reasonably accurate set of estimates of net IPM for the period between 1955 and 1982. With statistics from the 1987 Population Survey and 1990 Census, the set allows us to systematically study the dynamics and geography of long-distance migration in the entire socialist era since 1949. The quantitative information will also enable us in the future to better specify the mechanisms of IP population redistribution, as Liang and White (1993) have hoped.

The pre-1982 estimates also allow us to compare, indeed contrast, the characteristics of the IPM in the pre-reform and reform eras and make some preliminary generalization (Table 4). These two eras appear to be different, also corresponding to two different migration regimes. The first one, the socialist regime, covers roughly the first three decades (1950-80), is characterized by a high degree of state intervention in long-distance population transfers, involving mostly hukou migrants (Ma 1995). They migrated from the coastal to inland provinces, generally from more developed regions to the less ones. These migratory flows were in accordance with state national economic development programs (largely industrial and state-farm programs) mostly through semi-voluntary -- or semi-involuntary -- campaigns and resettlement programs. The spatial patterns are different from those one would expect in a market economy.

While some specific quantitative details of IPM in the pre-1982 period will have to be sorted out through more research, it is fairly clear that the IPM fluctuated from year to year, reflecting the timing of economic programs and sudden events. On average, however, its level was higher in 1955-65 than in 1966-82. Such a drop in long-distance mobility over time, especially given China's continuing industrialization in those years, is not in line with what is hypothesized in Zelinsky's "standard" mobility transition theory. It is highly probable that the standard theory will not work for China in the pre-reform era. In view of the similar patterns of temporal change in migration in some other former socialist countries during their more orthodox phases, as observed by Compton (1976) and Fallenbuchl (1977), and in rural-urban migration in China in the same period (Chan 1988), an alternative thesis is put forward to explain this temporal mobility change in the orthodox socialist phase of industrialization. It is postulated that Stalinist-type "big-push" industrialization programs carried out by these countries in the first phase (in China, the 1950s) caused extensive sectoral and spatial transformations in these countries, resulting in high rates of

migration at various spatial scales, including rural-to-urban migration and inter-regional migration. It is also not uncommon for serious economic dislocations to occur as a result of this type of radical approach such as the failure of the GLF leading to catastrophic famines in China, which also intensified long-distance migratory flows. After that, partly in response to problems created by over-investment in the first phase, central planners often adopted lower industrial growth targets and measures to control migration, resulting less drastic spatial changes and lower rates of migration in the second phase (from the mid-1960s to late 1970s in China) (see Fallenbuehl (1970; 1977) for Eastern European countries). It would be interesting to "test" this hypothesis in other (former) socialist countries when more accurate information are available.

It is also worth noting in passing that despite the drastic social and economic transformations going on in the 1950s through 1970s as described, at another level -- the rural sector, which was less controlled (or controllable) by the state -- traditions of migration continued to prevail in normal times. Instead of moving to cities to look for jobs (the option was not there for them), peasants shifted to other less populated provinces in Northeast and Northwest, very much following the footsteps of their agrarian ancestors, searching for arable land. This is striking in view of the rapid industrialization that went on in those decades. This phenomenon again speaks to strict institutional segmentation as has been analyzed by a number of authors (Christiansen 1990; Chan 1994b).

IPM in the 1980s and the 1990s can be considered to be belonging to another regime, the market-oriented one. It represents migration under "normal" circumstances, characterized by largely voluntary moves initiated by non-hukou migrants and, to a decreasing extent, by the government. It has two of the most important characteristics of a migration regime one would find in a market economy: flows are predominantly from the low-wage regions to high-wage regions (inland to coast in China), responding largely to the difference in the level of economic development; equally important, the long-distance mobility level also rises with time in this stage, as Zelinsky would predict.

If the long-distance geographical mobility in the 1980s is any indicator of the long-distance mobility of the Chinese population under "normal" circumstances, it is still very low compared to a comparable high-mobility country like the USA. It is likely that the long-distance mobility will

continue to rise in the remaining of the century, and IPM will play a greater role in redistributing Chinese population. As regional economic disparities, especially in the rural sector become a major public concern in China, it can only be expected that long-distance migration, in addition to local economic development, will become a more important policy tool in China's regional economic development.

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Table 1  
Net Inter-provincial Migration (in 1000)

|              | Unadjusted figures<br>Based on<br><u>Hukou</u> Registrations |         | Derived from<br>Adjusted Survival<br>Ratios |         |
|--------------|--|---------|---|---------|
|              | 1953-64  | 1964-82 | 1953-64                                     | 1964-82 |
|              | 1  | 2       | 3   | 4       |
| Beijing      | 639  | 24      | 751   | 123     |
| Tianjin      | 225  | 285     | 332   | 66      |
| Hebei        | 546  | 833     | 330   | 621     |
| Shanxi       | 701  | 529     | 627   | 302     |
| Nei Mongol   | 2154   | 67      | 1932  | 791     |
| Liaoning     | 214  | -686    | -759  | -1129   |
| Jilin        | 814  | -152    | 390   | -236    |
| Heilongjiang | 2800   | 1851    | 3566  | 1803    |
| Shanghai     | -1005  | -450    | -1087                                       | -378    |
| Jiangsu      | -37  | 658     | -530  | -237    |
| Zhejiang     | -140   | 359     | -744  | -205    |
| Anhui        | -123   | 1515    | -3808                                       | 1065    |
| Fujian       | 550  | 196     | 170   | -493    |
| Jiangxi      | 517  | 1307    | 600   | 365     |
| Shandong     | -2424  | -950    | -1948                                       | -2163   |
| Henan        | -158   | 1013    | -1777                                       | 638     |
| Hubei        | 23   | 856     | 89  | 1049    |
| Hunan        | -551   | 507     | -1499                                       | 225     |
| Guangdong    | -162   | 549     | -735  | -581    |
| Guangxi      | -154   | 835     | 362   | 375     |
| Sichuan      | 15   | 565     | -1780                                       | -4287   |
| Guizhou      | -210   | 543     | 286   | 420     |
| Yunnan       | 179  | 783     | 624   | 1101    |
| Tibet        | NA   | 9       | -23   | 242     |
| Shaanxi      | 1091   | 248     | 1144  | 362     |
| Gansu        | 262  | -6      | -113  | 127     |
| Qinghai      | 306  | 247     | 211   | 218     |
| Ningxia      | 205  | 217     | 140   | 135     |
| Xinjiang     | 1258   | 1282    | 1461  | 1071    |
| Total        | 7534   | 13033   | -1788                                       | 1390    |

Source: see explanations in text.

Table 2  
Estimates of Net Inter-provincial Migration, 1955-82 (in 1000s)

| Province     | 55-57 | 58-60 | 61-62 | 63-65 | 66-70 | 71-76 | 77-79 | 80-82 |
|--------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Beijing      | 193   | 757   | -284  | 40    | -598  | 198   | 247   | 102   |
| Tianjin      | -3    | NA    | NA    | NA    | -315  | 209   | 179   | 63    |
| Hebei        | -108  | -360  | 541   | -490  | 341   | 231   | 35    | 122   |
| Shanxi       | 172   | 280   | 86    | 290   | 230   | 28    | -29   | 18    |
| Nei Mongol   | 737   | 1743  | -381  | 242   | -54   | 218   | 34    | -2    |
| Liaoning     | -20   | -446  | -274  | 128   | -590  | -633  | NA    | 54    |
| Jilin        | -321  | 497   | 372   | 277   | 88    | -95   | -105  | -109  |
| Heilongjiang | 904   | 2032  | 237   | 624   | 571   | 1502  | 449   | -294  |
| Shanghai     | -561  | -843  | -161  | -83   | -685  | -224  | 321   | 89    |
| Jiangsu      | -363  | -6    | 229   | -156  | -68   | -151  | 92    | -37   |
| Zhejiang     | -356  | -395  | 17    | 254   | -65   | -16   | -43   | -118  |
| Anhui        | -101  | -1341 | -652  | -1714 | 450   | 170   | 336   | 387   |
| Fujian       | -155  | 408   | 103   | -381  | -7    | -390  | -130  | -174  |
| Jiangxi      | 195   | 524   | -48   | -43   | 411   | 6     | -127  | -10   |
| Shandong     | -363  | -2498 | 1843  | -841  | -157  | -1064 | -521  | 49    |
| Henan        | -568  | -241  | -11   | -874  | -157  | 411   | 305   | 233   |
| Hubei        | 339   | -102  | -234  | -45   | 765   | 151   | 46    | 82    |
| Hunan        | -99   | -964  | 22    | -91   | 89    | 170   | -163  | -144  |
| Guangdong    | -770  | 442   | 174   | -30   | -177  | -98   | -263  | -168  |
| Guangxi      | 105   | -10   | 381   | 208   | 292   | 11    | -48   | 68    |
| Sichuan      | 11    | -1790 | -916  | 843   | -2754 | -1050 | -299  | -248  |
| Guizhou      | 231   | 14    | -34   | 353   | 457   | -275  | -54   | 77    |
| Yunnan       | -38   | -15   | 205   | 545   | 588   | 253   | -72   | 74    |
| Xizhang      | NA    | -145  | 84    | 144   | 36    | 118   | 24    | -39   |
| Shaanxi      | 314   | 400   | 68    | 211   | 527   | 5     | -109  | -102  |
| Gansu        | 318   | 230   | -468  | 45    | 15    | -2    | -67   | 41    |
| Qinhai       | 157   | 493   | -464  | 38    | 80    | 75    | 17    | 8     |
| Ningxia      | NA    | 198   | -231  | 68    | 149   | 23    | -118  | 19    |
| Xinjiang     | 242   | 1133  | -209  | 433   | 541   | 193   | 62    | -39   |
| Total        | 92    | -5    | -5    | -5    | 3     | -26   | 2     | 2     |

Sources: Estimates by the authors.

Table 3

Inter-provincial Migration in the 1980s (in 1000s)  
Age 5 and Above

| Province     | 1982-87 |        |       |        | 1985-90 |         |         |        |
|--------------|---------|--------|-------|--------|---------|---------|---------|--------|
|              | In      | Out    | Gross | Net    | In      | Out     | Gross   | Net    |
| Beijing      | 321.3   | 98.6   | 419.9 | 222.7  | 672.7   | 132.1   | 804.8   | 540.5  |
| Tianjin      | 131.9   | 46.8   | 178.7 | 85.1   | 244.6   | 72.2    | 316.8   | 172.4  |
| Hebei        | 593.5   | 372.8  | 966.3 | 220.7  | 520.4   | 645.7   | 1166.1  | -125.3 |
| Shanxi       | 164.5   | 181.2  | 345.7 | -16.7  | 307.0   | 218.5   | 525.5   | 88.6   |
| Neimeng      | 167.5   | 204.5  | 372.0 | -37.0  | 254.3   | 303.1   | 557.4   | -48.8  |
| Liaoning     | 313.4   | 230.6  | 544.0 | 82.8   | 541.4   | 295.0   | 836.4   | 246.4  |
| Jilin        | 168.8   | 239.0  | 407.8 | -70.2  | 237.3   | 355.5   | 592.8   | -118.2 |
| Heilongjiang | 191.3   | 449.9  | 641.2 | -258.6 | 367.4   | 607.5   | 974.9   | -240.1 |
| Shanghai     | 371.9   | 81.9   | 453.8 | 290.0  | 665.5   | 132.6   | 798.1   | 533.0  |
| Jiangsu      | 474.5   | 320.6  | 795.1 | 153.9  | 791.1   | 620.5   | 1411.6  | 170.6  |
| Zhejiang     | 122.1   | 237.1  | 359.2 | -115.0 | 335.9   | 632.3   | 968.2   | -296.4 |
| Anhui        | 164.5   | 250.8  | 415.3 | -86.3  | 337.8   | 533.4   | 871.2   | -195.6 |
| Fujian       | 87.8    | 107.8  | 195.6 | -20.0  | 251.0   | 238.4   | 489.4   | 12.7   |
| Jiangxi      | 101.3   | 144.4  | 245.7 | -43.1  | 224.9   | 293.8   | 518.6   | -68.9  |
| Shandong     | 544.2   | 339.0  | 883.2 | 205.2  | 609.4   | 534.8   | 1144.3  | 74.6   |
| Henan        | 263.4   | 315.3  | 578.7 | -51.9  | 477.8   | 589.6   | 1067.5  | -111.8 |
| Hubei        | 273.9   | 223.3  | 497.2 | 50.6   | 431.1   | 346.3   | 777.4   | 84.8   |
| Hunan        | 216.4   | 377.1  | 593.5 | -160.7 | 271.8   | 528.6   | 800.4   | -256.8 |
| Guangdong    | 297.2   | 153.7  | 450.9 | 143.5  | 1257.5  | 250.5   | 1508.0  | 1007.0 |
| Guangxi      | 58.4    | 213.1  | 271.5 | -154.7 | 142.5   | 588.9   | 731.4   | -446.4 |
| Hainan       |         |        |       |        | 150.1   | 106.0   | 256.1   | 44.1   |
| Sichuan      | 386.7   | 471.8  | 858.5 | -85.1  | 469.9   | 1316.0  | 1785.9  | -846.2 |
| Guizhou      | 114.4   | 122.5  | 236.9 | -8.1   | 190.4   | 312.8   | 503.2   | -122.4 |
| Yunnan       | 95.1    | 183.0  | 278.1 | -87.9  | 250.3   | 277.4   | 527.7   | -27.2  |
| Tibet        |         | 35.0   | 35.0  | -35.0  |         | 54.6    | 54.6    | -54.6  |
| Shaanxi      | 224.7   | 284.0  | 508.7 | -59.3  | 314.6   | 362.3   | 676.9   | -47.8  |
| Gansu        | 93.3    | 189.9  | 283.2 | -96.6  | 199.2   | 280.7   | 479.9   | -81.5  |
| Qinghai      | 28.5    | 101.0  | 129.5 | -72.5  | 115.8   | 102.1   | 218     | 13.7   |
| Ningxia      | 91.0    | 50.0   | 141.0 | 41.0   | 91.9    | 56.6    | 148.5   | 35.3   |
| Xinjiang     | 202.0   | 238.8  | 440.8 | -36.8  | 341.7   | 277.4   | 619.1   | 64.3   |
| Total        | 6263.5  | 6263.5 | 12527 | 0      | 11065.4 | 11065.4 | 22130.7 | 0      |

Notes: Gross = In + Out  
No information on in-migration was collected for Tibet. Hainan was not a province before 1988.

Sources: SSB (1988); State Council and SSB (1993).

Table 4 Two Inter-provincial Migration Regimes

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|                                   | Pre-reform Era  | Reform Era  |
|-----------------------------------|---|---|
| Period                            | 1950-80   | 1980-present  |
| Migration regime                  | Soviet-type   | Market-oriented   |
| Driving force differences         | State economic development programs                                     | Regional economic   |
| Major types of migrants           | <u>Hukou</u> migrants   | Both <u>hukou</u> and non- <u>hukou</u> migrants                |
| Migration rate                    | High (1950-65) to moderate (1966-80)                                    | Low (1980-85) to moderate (1985-94)                             |
| Directions of flows regions)      | From coast to inland (more developed regions to less developed regions) | From inland to coast (less developed to more developed regions) |
| Impact on population distribution | Deconcentrating   | Concentrating   |

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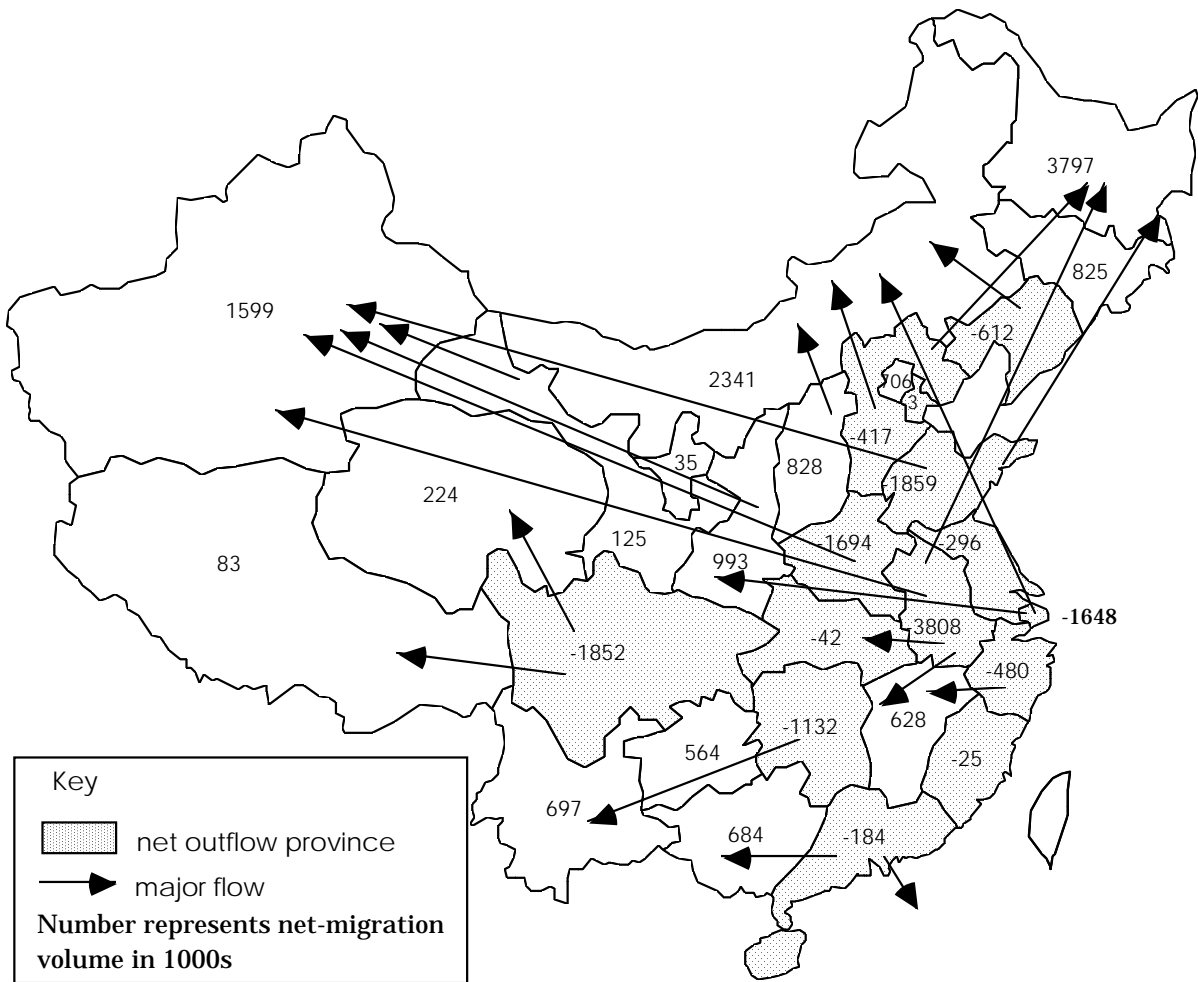


Figure 1. a) Net Inter-provincial Migration, 1955-65

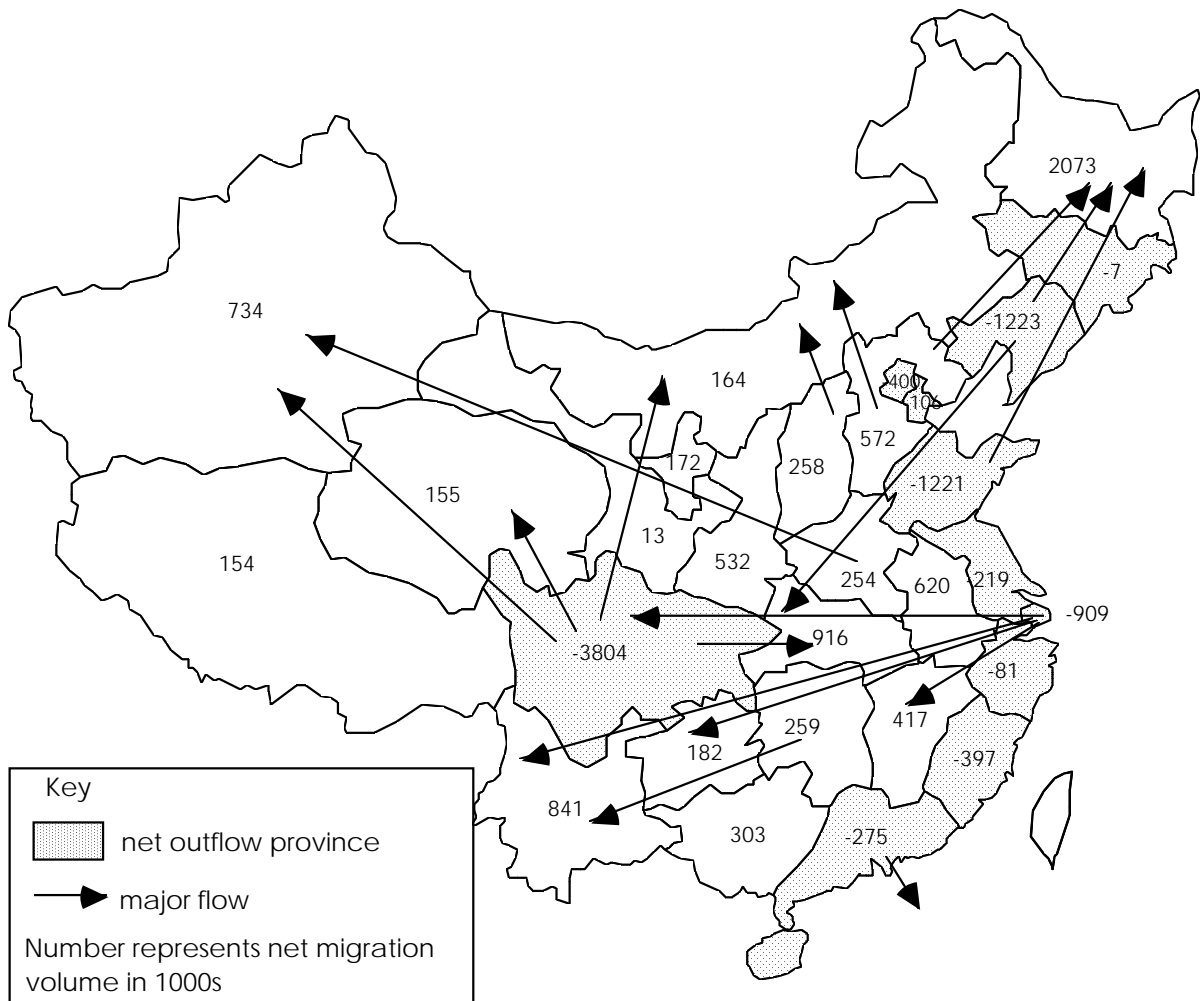


Figure 1. b) Net Inter-provincial Migration, 1966-76

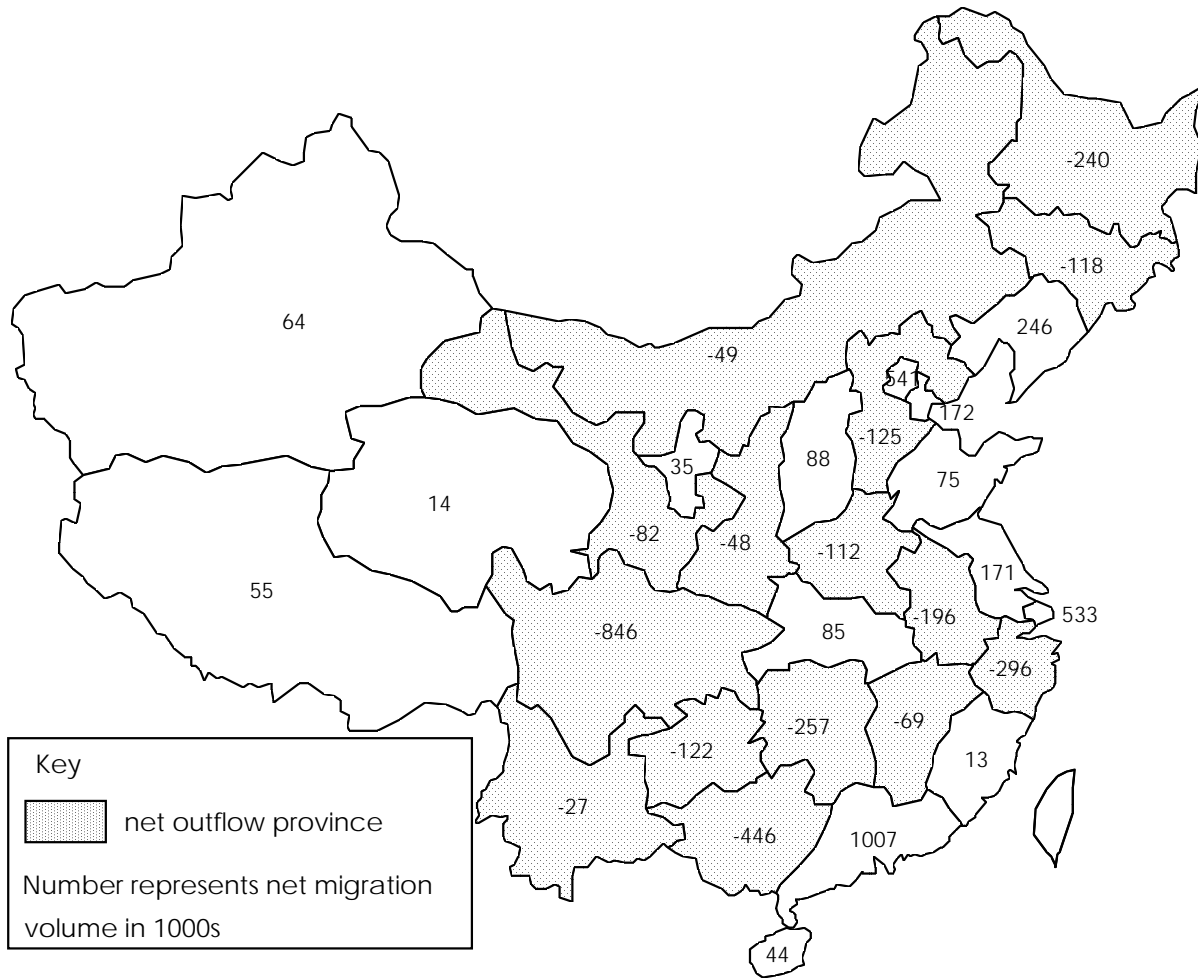


Figure 1. c) Net Inter-provincial Migration, 1985-90