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Urbanization
and Population
Redistribution
in Mongolia

Ricardo Neupert
Sidney Goldstein

EAST-WEST CENTER
OCCASIONAL PAPERS
Population Series
No. 122, December 1994



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PJ-ABU-759



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LIBRARY OF CONGRESS CATALOGING-IN-PUBLICATION DATA

Neupert, Ricardo, 1949-

Urbanization and population redistribution in Mongolia / Ricardo Neupert and Sidney Goldstein

P. cm. -- (East-West Center occasional papers. Population series, No. 122)

Includes bibliographical references (p.)

ISBN 0-86638-166-X (pbk. alk. paper)

I. Urbanization—Mongolia. 2. Cities and towns—Mongolia—Growth. 3. Rural-urban migration—Mongolia.

4. Post-communism—Mongolia.

I. Goldstein, Sidney, 1927- II. Title. III. Series.

HT147 M65N48 1994

307 3'416'09517—dc20

94-39475

CIP

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ACKNOWLEDGMENTS

Ricardo Neupert collected information for this paper while serving as Demographic/Statistical Advisor in Mongolia for the United Nations Population Fund (UNFPA) and the United Nations Department of Technical Cooperation for Development (UNDTCD). The authors greatly appreciate the cooperation of various government officials in making data available. They also gratefully acknowledge the extensive editorial assistance provided by Alice Goldstein, Senior Researcher in the Population Studies and Training Center at Brown University, and the very useful comments offered by two anonymous reviewers of the original manuscript. At the East-West Center, the paper was edited by Sidney B. Westley, typeset by Lois M. Bender, and proofread by Connie Kawamoto.

ABSTRACT

Mongolia serves as a valuable case study to help understand both the processes of urbanization and development and the course of change as countries undergo a transition from a socialist to a market economy. Especially after the 1950s, significant economic and social changes have transformed the nation's economy from an emphasis on pastoralism to a mix of industrial activities, sedentary livestock production, and farming

Urbanization in Mongolia has been significant and rapid. By 1990, the country had 56 urban places. Almost 60 percent of the population was urban, and 22 urban locations had more than 10,000 inhabitants. Three factors have been identified as major determinants of these changes. First, industrialization policy created industrial complexes in some existing urban locations and at new sites. Second, collectivization resulted in only marginal increases in rural production, not enough to absorb the growing rural population. Rather, rural residents formed a reservoir of labor for the expanding urban economy, especially in the provincial centers. Finally, administrative control of population movement, directed initially at settling the pastoralist population, was later used to channel rural out-migration to urban areas where labor resources were needed. Migration was thus a major factor in urban growth. Fertility, especially that of in-migrants, was also an important factor.

Governmental and economic transformation since the 1980s has seriously slowed economic growth, led to privatization of agricultural activities, and eliminated administrative restrictions on movement. While it is not possible to predict the long-term impact of these changes, rural-urban migration is likely to increase, and the urban population

will continue to grow through both heavy in-migration and high fertility. These developments can be expected to put considerable strain on natural resources and infrastructure.

Population distribution patterns, particularly those associated with problems of urban growth, rank high on the list of concerns in less-developed nations (United Nations 1993c, 38). This report deals with urbanization and patterns of population distribution in Mongolia. A unique mixture of socio-economic, demographic, political, and geographic characteristics makes Mongolia a particularly interesting case study.

Historically, almost every aspect of Mongolian society has been shaped by pastoralist livestock owners, who value mobility and cope with difficult circumstances by moving toward resources or away from problems. These values have discouraged permanent settlement, crop cultivation, and the accumulation of consumer goods.

Mongolia modernized under the aegis of a political party and a foreign ideology (Soviet Marxism) that emphasized rational planning and discouraged the use of market mechanisms to integrate society. Values of accommodation to and harmony with the natural world were replaced by a fervent assertion of the dominion of man over nature and a major effort to conquer and control the natural environment. An important component of the process of change was the enrollment of previously self-sufficient livestock owners into bureaucratically structured and economically specialized productive units—collectives in rural areas and state factories in urban places. Most Mongolians became sedentary wage earners, subject to labor discipline and to the supervision of a new class of managers and administrators. Concomitantly, sedentarization led to a national urban hierarchy.

Recent changes—from a pastoral, feudal society to a socialist-industrial-agricultural one and then to a democratic-capitalist one—have made the study of Mongolia's economic and demographic situation complex. Research difficulties are compounded by serious limitations in the available data.

These factors help to explain why so little has been published on demographic and economic change in Mongolia. The present study of urbanization patterns and the role of migration in urban growth helps to fill some of the gaps. In the process, it provides insights that can be of value to the study of urbanization in the Third World generally and more specifically in countries undergoing change from a socialist to a market economy.

Before turning to the situation in Mongolia, we begin with an overview of world urbanization and population-distribution patterns to provide a general context within which the Mongolian experience can be evaluated. This will be followed by a brief description of the economic, political, and demographic situation in Mongolia. The focus then turns to the population-redistribution policies promulgated since the 1960s.

The next section reviews the process of urbanization and the patterns of urban population distribution during the 1970s and 1980s. The paper concludes with an analysis of the role of migration and natural increase in the growth of the nation's major cities and smaller urban centers. Throughout, the emphasis is on evaluation of the relationship between urbanization and the processes of economic, social, and political change experienced by Mongolia in the twentieth century.

**URBANIZATION
IN DEVELOPING
COUNTRIES**

The 1974 World Population Conference in Bucharest and the 1984 International Conference on Population in Mexico City, both organized by the United Nations, recognized urbanization as an integral part of the development process and stressed the importance of integrating population-distribution policies into overall development planning as a way to promote more equitable regional development (Zlotnik 1994). The deliberations at those conferences led to a series of recommendations on population distribution. These included the use of incentives to reduce undesired migration and to stimulate the growth of small and medium-sized cities; the

reduction of inequalities between urban and rural living conditions; and more equitable policies to improve job opportunities, production and income levels, and the educational, health, and housing infrastructure in both urban and rural areas (Zlotnik 1994, 197).

In planning for the 1994 World Population Conference, the United Nations organized a series of expert meetings on key topics related to the interaction between population and development. Among these was an Expert Group Meeting on Population Distribution and Migration, held in Santa Cruz, Bolivia, in January 1993. Again, the group emphasized the importance of urbanization in development and stressed the marked differences between ongoing urbanization processes in developing countries and those that characterized the developed world a century earlier (Zlotnik 1994, 172). Large-scale rural-to-urban migration has emerged as one of the most serious population problems confronting developing countries (United Nations Population Fund 1993), it is of special concern because of its presumed linkages to poverty and environmental deterioration.

Between 1950 and 1990, the urban population in less-developed countries (LDCs) increased almost fivefold—from 0.3 billion to 1.4 billion (United Nations 1993d). In contrast to the historical experience of more-developed countries, the rural population of LDCs also continued to grow, almost doubling to 2.7 billion. Despite the anticipated onset of rural population decline by about 2015, more than 3 billion persons are projected to be living in the rural areas of LDCs in 2025; they will constitute a vast reservoir of potential migrants to urban places and to other countries. Because of their numbers and rising consumer demands, the 4 billion persons who will be in urban locations of LDCs by 2025, accounting for more than half of the LDC population, will also be placing pressure on food, water, and energy resources, as well as on the urban infrastructure.

Concern with urban growth also reflects the growing number of very large cities and the special problems they confront in meeting the housing, employment, educational,

and social needs of their residents. In 1950, only 10 of the world's 30 largest urban agglomerations and three of its 10 largest cities were located in LDCs; the largest of these—Shanghai—contained an estimated 5.3 million persons. In 1990, the United Nations reported that 20 of the world's 50 largest urban agglomerations and seven of its 10 largest cities were in LDCs.

The largest city in an LDC in 1990, Sao Paulo, was estimated to have a population of 18.1 million—more than three times that of Shanghai in 1950. In fact, in 1990 all 20 of the largest cities in LDCs had more inhabitants than did Shanghai in 1950. Lima, Peru, with 6.5 million, was the smallest of the top 20.

URBAN PRIMACY

The United Nations, in its assessment of urbanization, has been particularly concerned with the structure of the urban hierarchy in individual countries, and especially with primacy conditions, that is, the disproportional concentration of people in a country's largest urban center. High levels of population primacy are usually associated with a disproportional concentration of major functions—political, economic, and educational—in the primate city (United Nations Population Fund 1993). Lessening of primacy through the development of secondary cities generally reflects greater diversification of such functions, especially economic ones, and greater regional equality.

United Nations studies, consistent with other research, measure urban primacy as the ratio between the population of a country's largest city and the aggregated population of the country's three next largest cities. This provides a crude index of balance between the leading cities in the national urban hierarchy. An index greater than 1.0 points to a primacy condition. Changes in this index over time indicate whether the dominance of the leading city is increasing or diminishing.

It is generally assumed that primacy will be greater at

early stages of development when economic efficiency usually requires a concentration of infrastructure investment and financial, industrial, and commercial activities in a single location (Renaud 1981, 107). This, in turn, leads to concentration of secondary and tertiary industries and the attraction of migrants, who are drawn from rural areas by actual or perceived employment opportunities. As national and regional development proceeds, primacy conditions are likely to diminish. Regional cities, with their improved infrastructure and enhanced cultural activities, become increasingly important as educational, commercial, and even political centers.

The extent of primacy varies depending on a country's size, geography, population, history, ecology, and political organization. In 1990, for example, China had a four-city primacy index well under unity, at only 0.433, while India's was only 0.505. These indices reflect the two nation's large territories, patterns of population distribution, and historical conditions that led to an urban structure organized more at the provincial or state level than at the national level.

By contrast, Thailand has a long history of primacy, which reflects the dominant role of Bangkok, both in the urban hierarchy and in the development of the nation. In 1990, Thailand's four-city primacy index was 7.404, somewhat less extreme than its 1970 index of 9.877 or its 1960 index of 9.460.

The high degree of primacy in Thailand and in a number of other countries has led to government policies designed to create a more balanced urban hierarchy, to reduce regional inequalities, and to stem the massive tide of migrants to the primate center (Stren, White, and Whitney 1992; United Nations 1993a).

The United Nations (1993a, 7) has stated, "The paucity of generalizations about urban primacy and urban structure suggests the need to examine countries individually and to explore a wide range of the factors that shape patterns of population distribution." This paper on Mongolia is one response to the United Nations charge.

THE ROLE OF MIGRATION

Migration already plays a key role in the world's population dynamics. The United Nations estimates that between 1975 and 1985 net internal migration of all types (rural-to-urban, urban-to-rural, rural-to-rural, and urban-to-urban) involved between 750 million and one billion persons, augmented by another 75–100 million living outside their country of birth or citizenship (United Nations 1993b, 122). Rural poverty, high fertility, and environmental degradation drive some 20–30 million of the world's poorest people to towns and cities every year (UN Population Fund 1993, 11).

The importance of migration to urban growth in Asia is indicated by data prepared by the Economic and Social Commission for Asia and the Pacific (ESCAP). For the ESCAP region as a whole, 62 percent of urban growth between 1980 and 1985 was attributable to migration and the reclassification of rural areas as urban places (much of which, with the possible exception of China, reflects a migration effect). The balance of urban growth was due to natural increase. The importance of the migration and reclassification component of urban growth varied considerably, however, among subregions and countries. The preponderant influence of China's size on statistics for the whole region, as well as the effect of China's change of urban definitions (Goldstein 1990), argues for excluding that country from the total. If this is done, only 37 percent of all urban growth in the region reflects migration/reclassification. Its importance is projected to increase to 41 percent by 1990–95 and to 50 percent by 2000–2005 (ESCAP 1992).

In East Asia, only one-third of total urban growth was attributable to migration (exclusive of China, where it was 84 percent), compared with 44 percent in South Asia and 51 percent in Southeast Asia. Even within subregions, countries varied considerably. In Southeast Asia, for example, Myanmar's net out-migration from cities between 1980 and 1985 reduced the urban population by 10 percent (although more than compensated by natural increase), whereas more

than 60 percent of Thailand's and Indonesia's urban growth was attributable to in-migration

The ESCAP projections for Southeast Asia anticipate that the contribution of migration to urban growth will increase from 51 percent in 1980-85 to 58 percent in 2000-2005. In South Asia the contribution of migration will increase from 44 percent to 53 percent, while in East Asia (excluding China) it will remain at about one-third. In China the contribution of migration to urban growth is projected to decline from 84 to 73 percent. Again, individual countries vary greatly in the changes projected. Myanmar's 10 percent net migration loss will change to a 56 percent increase by 2000-2005, for Thailand, migration's contribution to total urban growth will rise from 60 percent to 69 percent, and for Indonesia, the percentage will decline slightly from 65 percent to 63 percent.

In general during 1980-85, migration was found to be a more important component of urban growth in the LDCs of Asia than in the more-developed countries of the region, and migration became more important over time. As urban populations increase in size, with more substantial numbers of resident women at reproductive ages, natural increase may take on more importance as a component of growth. The exception could be countries that achieve a significant reduction in urban fertility levels, such as China (United Nations 1980, 20-35).

THE VARIETY OF URBANIZATION EXPERIENCE

Many researchers have studied the relationship between levels of urbanization, patterns of population distribution, degrees of primacy, rates of urban and rural population growth, and urban settlement patterns on the one hand, and socio-economic development and industrialization on the other (Goldstein and Sly 1976; Dogan and Kasarda 1988; Ginsburg, Koppel, and McGee 1991; Stren, White, and Whitney 1992; Kasarda and Parnell 1993). While most studies have stressed analysis of differences between urbanization in less- and more-developed countries, some researchers have focused on

the characteristics of urbanization in countries with centrally planned economies.

As the number of countries undergoing substantial urbanization has increased, it has become clear that a simple taxonomy fails to explain adequately the variety of urbanization experiences in relation to social and economic development. For example, within developed countries, urbanization in Australia has been quite different from the experience of South Africa, where population distribution cannot be divorced from racial policies. Urbanization patterns in Latin America, with strong tendencies toward population concentration in primate cities, are quite different from those in South Asia

Among countries with centrally planned economies, experience has varied considerably in terms of implementation of population-redistribution policies and success in controlling urban growth. Like any other social process, urbanization and population distribution are historically conditioned and modulated by a society's institutional structure. To ignore this premise is to assume that institutional patterns are homogeneous and constant across societies or that they change in determinate, predictable ways.

To understand fully the extent of variation in urbanization across countries and to identify commonalities, analysts require a number of case studies encompassing a wide range of urbanization patterns. These should be undertaken in countries at various stages of development, with different modes of adjusting population distribution to economic, social, and political conditions

Comparisons of country experiences should allow better assessment of urbanization patterns in individual countries, as opposed to aggregate trends, and identification of similarities and differences in the trends and levels of urbanization under different sets of historical, social, economic, and environmental conditions. As Dogan and Kasarda (1988, 24-25) have argued with regard to research on megacities, "We should not forget that each major city—being generated by a complex of history, geography, economics, climate,

ecology, culture, and politics—is, in a sense, unique. But, knowledge advances by comparing even what is unique. The experience of Mongolia provides a valuable case study, elucidating the underlying patterns common to countries undergoing urbanization as well as the changes that occur as nations shift from a command to a market economy.

ECONOMIC,
SOCIAL, AND
DEMOGRAPHIC
CHANGES IN
MONGOLIA

Modern Mongolia is a land-locked country located in the northern part of Central Asia between Russia and China. Its territory covers approximately 1.5 million square kilometers, and its 1992 population was 2.2 million. Mongolia's population density, at 1.5 inhabitants per square kilometer, is one of the lowest in the world. According to the most recent census (1989), 57 percent of the population lives in urban areas, with major concentrations in three cities: Ulaanbaatar, the capital, and the two industrial cities of Darhan and Erdenet.

Mongolia's nationhood can be traced to the year 1206, when Genghis Khan succeeded in uniting Mongolian tribes into the first Mongolian state. This initiated a process of conquest that evolved, under his grandsons Kublai and Batu, into a huge empire. By the sixteenth century, however, the empire of the great khans had dissolved; its decline culminated in the seventeenth century, when Mongolia came under the control of the Manchu empire. In the following two and a half centuries the country became a backward, traditional, and impoverished society, with an economy based on subsistence pastoralism. This period was characterized by a strengthening of the feudal system and the ascendancy of the Lamaist religion. The Chinese Manchu rulers directly controlled the southern fourth of the original state of Mongolia. The northern three-quarters had a little more autonomy but were also under Manchu political and economic control. (This brief history of Mongolia relies heavily on Asian Development Bank 1992, Brown and Onon 1946; Haslund-Christensen 1935; Lattimore 1962; Montagu 1956; Rupen 1964.)

The Chinese Revolution in 1911 gave the northern

territories the opportunity to claim independence. However, by 1915 independence was scaled back to autonomy under Chinese suzerainty, and in 1919 Mongolia was reincorporated into China. Independence was reasserted in 1921, and a constitutional monarchy was established, but it was abolished following the ruler's death in May 1924. In November of the same year, with the ratification of the First Constitution, the Mongolian People's Republic was founded.¹

The years from independence through the end of World War II were marked by political instability and civil unrest, as well as by sudden shifts from a market-oriented economy, in which the private sector played a leading role (1924–28), to one in which all productive assets were nationalized (1928), then to a reversal of this policy (1934), and once again to a slow reestablishment of state ownership that was completed by the late 1950s. Coincidentally, the Lamaist church was sequentially tolerated, persecuted, encouraged, and finally eliminated (1938–39).

As an independent nation, Mongolia was a vast territory with a small population. According to official statistics, the population of the country in 1918 was only 648,100 (Mongolia, State Statistical Office 1991). This number must be regarded as approximate, but it strongly suggests that the population was in fact small.

In the following four decades population growth seems to have been quite modest. The 1956 census enumerated a population of 845,500 (Mongolia, State Statistical Office 1991), again a rough estimate.² Such a modest population increase was undoubtedly the result of the political and economic instability experienced by the country between independence and the end of World War II.

Mongolia did not participate directly in World War II until just before the war's end in 1945, but nevertheless the

1 The southern part of what was originally Mongolia is now the Inner Mongolian Autonomous Region of the People's Republic of China.

2 Seven censuses have been conducted in Mongolia, but only the last three (1969, 1979, and 1989) provide reliable information. The previous four censuses provide approximate data that must be interpreted with caution.

tempo of its development was slowed. The Soviet Union, Mongolia's main trading partner and provider of development aid, curtailed direct economic assistance as a result of the war. For its part, Mongolia reorganized its economy toward supporting the Soviet war effort.

ECONOMIC CHANGES

Once the country became politically stable after the war, the shift toward a command economy was definitive. In 1948, the Eleventh Congress of the ruling Mongolian People's Revolutionary Party (MPRP) approved the First Five-Year Plan, which reflected the determination of the party and the government to develop the national economy on the basis of central planning, with emphasis on industrialization and collectivization of the agricultural sector. This marked the real beginning of a modernization program that eventually led to decisive change. Nonetheless, it was not until the mid-1950s, with the implementation of the Second Five-Year Plan (1953-57) and the Three-Year Plan (1958-60), that any significant progress became apparent (Mongolia, Academy of Sciences 1990).

The period between 1961 and 1985 was covered by five plans. The third and fourth plans focused on meeting domestic consumption needs, whereas the emphasis of the three subsequent plans was on large-scale industrial development for export (Milne et al. 1991). These efforts were facilitated by the financial and technical assistance of the USSR and other members of the Council for Mutual Economic Assistance (CMEA).³

The implementation of these plans greatly affected the structure of the economy. In 1940, industry accounted for only 7 percent of the national income, whereas in 1980 its contribution was 31.9 percent. The share of agriculture fell from 76.1 percent to 20.3 percent during the same period.

3 The CMEA, formed in 1961, included Bulgaria, Cuba, Czechoslovakia, Hungary, Mongolia, Poland, Romania, the USSR, and Vietnam.

The share of construction, transport, communications, trade, and other sectors rose from 16.9 percent in 1940 to 47.8 percent in 1980 (Mongolia, State Statistical Office 1991).

Industrialization in Mongolia was strictly planned. The emphasis was on developing a transformation industry directed mainly toward processing agricultural and natural resources. After War World II, definitive decisions were taken regarding the major role of industrialization in the economic development of the nation. All the economic plans emphasized the need to industrialize as the only way to achieve development. Since Mongolia lacked a basic industrial infrastructure, the emphasis in the first three plans was on transport and communication development, energy production, and urban construction.

Parallel to the development of this infrastructure, the first modern industries were established, focusing on production initially for the internal market and later for export. Investments were directed mainly to meat processing, textiles, leather and fur processing, and production of construction material. During the second half of the 1970s, mining (mainly copper, molybdenum, and fluorspar) became an important export-oriented branch of the economy. The share of mining in the national product grew from less than 1 percent in 1960 to about 17 percent in 1985 (Mongolia, State Statistical Office 1991).

The process of industrialization depended heavily on Soviet investments in the form of joint ventures or direct development loans. Soviet interest in Mongolia's industrialization stemmed logically from the desire to develop a Mongolian industry capable of supplying the USSR with substantial quantities of meat, wool and related products, construction material, minerals, and some manufactured goods. There were no attempts to develop heavy industry or to diversify production. Mongolia's industry remained light and ancillary to the livestock base of the economy.

An additional reason for industrialization was more doctrinal than practical. Mongolia had to be brought into line with the rest of the Soviet block, where rapid industrializa-

tion was in progress. The official goal had always been to establish the industrial sector as the most important part of the economy, and in attempting to accomplish this the government acted in conscious imitation of, and with reference to, the experiences of the USSR and other socialist countries. Theoretical considerations of Marxist economic and social organization thus weighed more heavily than purely technical ones.

The Mongolian government shared the Marxist view held by theorists in the Soviet Union that industrialization was a desirable goal and the only real base for economic and social progress. However, the government also realized that agriculture in general, and livestock production in particular, would inevitably remain a cornerstone of Mongolia's economy. By the early 1950s, livestock production was still the main economic activity of most of Mongolia's population, and the country had large herds of cattle, sheep, goats, horses, and camels. Livestock production was based almost entirely on small-scale pastoralism, practiced in units of two or three families.

Not surprisingly, livestock production by small, pastoral family units was not consistent with the principles of a centrally planned economy. After the revolution, the government made several attempts to create cooperatives and state farms, but only a limited number of livestock producers joined these new entities. As part of the shift toward a command economy, stronger, more effective measures were introduced to collectivize agriculture. For example, high taxes and compulsory delivery of meat quotas were imposed on private livestock owners, while cooperatives, in contrast, had an extremely low tax structure and received preferential loans.

In spite of these measures, pastoralist families still accounted for nearly three-quarters of the rural population in 1955. New regulations and direct coercion reduced this proportion to one-third by the end of the 1950s. Finally, the 1960 Constitution formally restricted private ownership of livestock, abolished private land holding, and reserved all

production for the state. By 1963, the process of collectivization of the agricultural sector was complete. The proportion of families outside the cooperatives or state farms was less than 1 percent (Milne et al. 1991).

Beginning in the 1960s, crop production became an independent branch of agriculture. Development was possible only after overcoming many technical difficulties stemming from the country's geographic and climatic constraints. Huge mechanized state farms were established, specializing in the production of grain and some vegetables. One official objective of this initiative was to reach self-sufficiency in grain.

Modernization of livestock production also received attention. Cooperatives obtained considerable support for developing infrastructure such as storage facilities, workshops to produce granulated fodder, and fattening pens. Formerly widespread livestock diseases were almost completely eliminated through the development of extensive veterinary services (Mongolia, Academy of Sciences 1990). To encourage monetization of the economy in rural areas, cash payment for labor replaced in-kind compensation in both cooperatives and state farms.

Since 1950, agricultural activities in Mongolia have been substantially modernized. Nevertheless, progress has been limited, especially in the livestock sector. Industrial beef production and modern dairy farms are still more the exception than the norm. For the most part, animal production continues to be a traditional, labor-intensive activity, and much more progress is needed to make this sector competitive in the world market.

One constraint has been the rigidities imposed by the centrally planned system (Asian Development Bank 1992). Overall, agricultural production has shown only modest growth since the 1960s and has failed to keep pace with the rate of population growth (Milne et al. 1991). Official planning, especially beginning in the 1970s, gave priority to industrialization, urban construction, and mining as opposed to agriculture.

SOCIAL DEVELOPMENT

By contrast, social progress has been enormous. Whereas in the early 1920s few people other than lamas and monks knew how to read and write, by the end of the 1970s more than 90 percent of the population was literate and almost one-third had completed secondary education. The country also developed a fairly modern, comprehensive social security system with pensions granted to men at age 60 and to women at age 55. State pensions for members of agricultural associations were introduced in 1976. The government also established a health infrastructure extending to the community level, with health care provided free. According to the most recent statistics, Mongolia has 2.8 physicians and 12.4 hospital beds per 1,000 population.

By the early 1990s, life expectancy was more than 60 years and infant mortality was approximately 60 per 1,000 (Mongolia, State Statistical Office 1991). These indices reflect poorer health conditions than those of nearby countries, such as North Korea and China: both those countries have life expectancies close to 70 years, and the infant-mortality rate is 25 per 1,000 in Korea and 30 per 1,000 in China. However, Mongolia's rates are far better than those of Cambodia or Myanmar. Most notably, they represent substantial improvements over the situation in the past. For example, it is estimated that in 1900 one out of every two children died before its first birthday, and life expectancy was not higher than 45 years (UNICEF and Mongolia, Ministry of Health 1991). Life expectancy in Mongolia remained this low until after 1950.

Because of the government's concern with the country's small population size and the limited rate of population growth before World War II, the Third Five-Year Plan (1961-66) included strong pronatalist provisions. A number of childbearing incentives were endorsed by formal laws. The Women's Union, a government agency, was given responsibility for promoting large families and depicting reproduction as a civic duty. Women with more than five children

received cash allowances, medals glorifying maternity, and the right to retire at age 50. A tax was imposed on unmarried adults and childless couples. By the end of the 1960s, the production, importation, distribution, and even use of contraceptives were prohibited by law. Strict criteria governed abortion and sterilization.

This policy was in part responsible for the persistence of historically high levels of fertility into the 1960s and 1970s. The country's total fertility rate fluctuated between 7.0 and 7.5 children per woman. Combined with declining mortality, this high fertility resulted in unprecedented rates of natural increase. By the end of the 1960s, the population of the country reached one million; two decades later, it was about two million.

The average annual rate of growth between 1969 and 1989 was almost 3 percent (Neupert 1992). During the 1980s, however, in spite of the pronatalist policies, fertility began a sustained and rapid decline. The estimated total fertility rate for 1992 was approximately 3.4 children per woman (Mongolia, State Statistical Office, unpublished statistics, 1993). Although analyses of the determinants of fertility decline in Mongolia are not available, quite likely this substantial fertility decrease is related to the nation's rapid modernization and development.

TOWARD A MARKET ECONOMY

The rapid rate of industrialization in the 1970s and early 1980s resulted in increasing internal and external imbalances. These became evident by the mid-1980s, when Mongolia began a slow transformation away from total socialism. At the end of 1989, like other former socialist nations, Mongolia began to shift from central control to a market-oriented economy. The country also experienced changes in political leadership and a radical revision of its economic, social, and political ideology. In 1991, because of its own economic crisis, the USSR, which had provided most of the development aid and had financed budget deficits, discontinued its support.

Because of these abrupt changes, a series of chain reactions occurred: Investment projects ground to a halt, and key industries fell behind schedule because of lack of essential parts, equipment, and raw materials. The volume of trade fell dramatically and, as a result, the country began experiencing a sharp decline both in real income and in economic activity.

By 1993, Mongolia faced balance-of-payments problems and insufficient institutional capacity in the short term and deep-seated structural problems in the long term. The country faced a deep economic crisis characterized by inflation, unemployment, severe food shortages, and a substantial decline in the standard of living (Asian Development Bank 1992; Milne et al. 1991)

Between 1990 and 1992, production declined dramatically. Total agricultural output fell by 7.4 percent from 1990 to 1991, and by 60 percent from 1991 to 1992. Industrial output declined by 11.7 percent from 1990 to 1991, and by 15 percent from 1991 to 1992. The full-employment policy, distinctive of most centrally planned economies, had made unemployment virtually nonexistent. With the move to a market economy, the level of unemployment reached 6.5 percent by the end of 1992.

Compared with other Third World countries, this percentage may not seem all that high. However, it includes only those unemployed persons who were officially registered—the real figure may be much higher.

The purchasing power of households has been severely reduced. The value of the *tug* fell steadily: according to the official exchange rate, US\$1 was equal to 40 *tug* in 1990 and to 150 *tug* in 1991. Between 1990 and 1992, the consumer price index for basic commodities increased more than fourfold, while real income decreased by 40 percent. In January 1992, some 69,000 families had incomes below the official minimum level; by the first quarter of 1993, the number of families with incomes below that level had increased to 108,000 (Mongolia, State Statistical Office, unpublished statistics, 1993).

**POPULATION
DISTRIBUTION
POLICY**

Mongolia's leaders believed that the development of a modern socialist nation was incompatible with a mobile subsistence population existing almost entirely on the surplus production of extensively managed livestock. Modernization and development, especially within the framework of a socialist society of wage-earners, required a substitute for pastoralism. Following the model of the Soviet Union and other socialist countries, this substitute was collectivization of all agricultural assets into state-controlled cooperatives and state farms. (For an analysis of the process of collectivization and some of its consequences, see Bawden 1968; Brown and Onon 1976).

By the early 1940s, the country had been divided into *aimaks*, or provinces. By the beginning of the 1950s, each *aimak* was divided into *sum*, or rural districts. These administrative units were the territorial equivalent of cooperatives (Potkanski and Szykiewicz 1993), and the rural population was settled at the *sum* level. In each *aimak*, a provincial capital city, or *aimak* center, was established to function primarily as the administrative and service center for the rural population. In each *sum*, a small administrative unit was also created.

Thus sedentary, urbanized agglomerations were introduced in pastoral areas, giving a focus to many of the livestock owners' economic and social activities. This pattern of settlement was consistent with the economic and political system adopted by the government. Since agricultural production was to be centrally planned, the government required a high degree of control over productive activities throughout the country. A major administrative function of the *aimak* and *sum* centers was the local implementation of the economic plans designed by the central government.

Regional offices of the ruling party, the MPRP, were established in all *aimak* centers and *sum* administrative units. These offices had a major role in the implementation of the collectivization program. As the process of collectivization proceeded in the 1950s, control was established over the movement of all cooperative members. They were not

permitted to change jobs or to leave their home areas without approval of the authorities. Identification documents were issued that tied the rural population to their locality. Live-stock production remained extensive and to some extent nomadic, but the herds of the cooperatives could graze only in the pastures allotted by the state within the area of the *sum*.

According to the measures governing geographic mobility and legal place of residence, a person who wanted to move permanently from one *sum* to another or to an urban area needed administrative authorization from the local government in both the place of origin and the destination. To obtain such permission, an individual needed a formal job offer in the place of destination and a waiver from the current job in the place of origin. During the 1960s, these restrictions were applied mainly to rural-to-rural movement. In fact, during the 1970s, when the government began investing heavily in Ulaanbaatar and other cities, rural-to-urban migration was encouraged.

With few exceptions, all industrial activities in Mongolia were concentrated in urban areas—especially in the capital, Ulaanbaatar. The growing industries and their administration, the double party and government apparatus, the supervisory mechanisms demanded by the growing complexity of integrated, state-controlled production and marketing—all required a larger labor force than was available in Mongolia's small cities. Therefore, the official policy was to stimulate migration from rural areas to Ulaanbaatar and to other cities, including most *aimak* centers. This objective was accomplished by a propaganda campaign and by setting salaries for nonagricultural activities above those paid for agriculture.

Hence, the aim of the government's population-distribution policy was not to inhibit all migration but rather to control and direct migration according to labor demands in both rural and urban areas. Direct control of migration was a common practice in China, Vietnam, and most centrally planned economies in Eastern Europe, and it was consistent

with the overall development strategy of a strictly planned allocation of productive resources, including the labor force. Mongolia was no exception.

During the late 1950s and the 1960s, when industrialization began, the government did not need to encourage migration to urban areas, nor was forced rural out-migration necessary. In fact, collectivization seems to have been a major push factor in the countryside. The conversion of independent livestock owners into wage-earners in state cooperatives and farms did not come about spontaneously. Most socialist countries implemented collectivization through propaganda and coercion, and sometimes by violence as in the Soviet Union.

Very little has been published about the process of collectivization in Mongolia except in official and very general terms. However, it is clear that such change did not reflect the preferences of private livestock owners. Manifestations of opposition certainly existed, although they were limited and isolated. Many pastoral families apparently perceived that moving to urban places and taking secure jobs in the industrial or construction sectors could provide them with a number of advantages over continuing in rural areas under a regime of collective animal husbandry or farming. Clearly, the process of collectivization did not create conditions conducive to retaining the population in rural areas or to absorbing its natural growth into the labor force (Bayasgalan and Suhbaatar 1992).

In addition, the creation of large collectives appears to have facilitated an intensification of agricultural production through technical improvements and mechanization. Although in absolute terms improvements in the agricultural sector were limited during the first decades of this century, progress was enormous compared with the situation in the nineteenth century. Even this limited modernization of agriculture reduced the demand for labor and thus created a labor surplus. Evidence from several countries shows that a process of rural out-migration is usually triggered by an initial increase in agricultural productivity (see, for example,

Renaud 1981; McNicoll and Cain 1990). In fact, between 1940 and 1990, the productivity of agricultural labor increased more than fourfold in Mongolia (Mongolia, State Statistical Office 1991).

Beginning in the 1970s, more severe restrictions were imposed on rural-to-urban migration. As natural increase in urban areas began to provide the necessary labor resources, migration became less necessary. Recognizing that overall development strategy could have strong implicit spatial impacts, the government did not want to leave population movement entirely to market forces. Specifically, officials were concerned that rapid urbanization might result in an excess of urban labor supply, with undesired economic and social consequences.

Nevertheless, rural-to-urban migration was not inhibited completely. Government policy was consistent with the general goal of industrializing the country and, consequently, increasing employment in the nonagricultural sector. A continuous but more moderate stream continued to flow to Ulaanbaatar and most *aimak* centers. In the late 1960s and again in the mid-1970s, such movement was encouraged to satisfy labor demands from a new industrial complex created in the city of Darhan and from mining activities in the newly created city of Erdenet.

In any case, the government was not able to control migration completely. A large number of migrants received only temporary permits to reside and work in urban areas. However, using many legal subterfuges, most of them and their families became permanent residents. In addition, temporary migration permits obtained by the children of cooperative members or state farm workers to study in urban centers frequently became permanent permits when they finished their schooling. Status and residence could be legally changed through education (Potkanski and Szykiewicz 1993). Temporary migration related to military service was also used to secure a permanent urban residence. Nonetheless, these occurrences were more exceptions than the norm, and the laws on restriction of residence appear, in general, to

have been effectively used to discourage, encourage, or redirect population movements.

The radical political and economic changes that occurred in Mongolia during the 1970s and 1980s included important modifications to the government's population-distribution policy. These changes culminated in 1992, when Mongolia adopted a new constitution. The new legislation, consistent with the political changes that had taken place, gave Mongolian citizens the right to choose their place of residence. Legally, therefore, the administrative measures that limited and controlled internal movements no longer exist. Even the laws that regulated external movement became more flexible. Mongolian citizens can now travel freely or live abroad.⁴ The implications of these policy changes will be discussed.

**URBANIZATION
AND PATTERNS
OF URBAN
POPULATION
DISTRIBUTION**

Before independence, virtually no cities existed in Mongolia except the capital city of Ulaanbaatar. This was not surprising in a country where the vast majority of the population was engaged in livestock production and the rudimentary processing of animal by-products. Internal political and economic power was vested primarily in the temples and monasteries (lamaseries), which were the main permanent settlements and regional centers for the limited nonagricultural economy.

In the decades immediately following independence, other urban centers began to develop, mainly as a result of emerging manufacturing activities. However, the country began to experience significant urbanization and the growth of urban localities only in the 1950s. This development was clearly associated with the overall processes of economic and social change after World War II, and in particular with industrialization and collectivization.

⁴ Since World War II, international migration has been negligible in Mongolia. Some temporary immigration on a contractual basis occurred from China and from countries of the CMLA to supplement labor resources. Emigration was limited to temporary residence of Mongolian students in CMEA countries (United Nations 1989).

URBANIZATION TRENDS, 1969-89

Table 1 shows the patterns and trends of population distribution in Mongolia as revealed in the 1969, 1979, and 1989 censuses. Our discussion will focus on this 20-year period because only these three censuses are of adequate quality and include tabulations that are relevant for the analysis of

Table 1. Population patterns and trends Mongolia, 1969, 1979, and 1989

	Total population (000s)			Population distribution (%)			Average annual growth rate (%)	
	1969	1979	1989	1969	1979	1989	1969-79	1979-89
Urban center								
Cities								
Ulaanbaatar	267.4	402.3	548.4	22.3	25.2	26.8	4.17	3.15
Darhan	23.3	50.7	85.7	1.9	3.2	4.2	8.08	5.39
Erdenet	-	31.9	56.1	-	2.0	2.7	-	5.81
Total	290.7	484.9	690.2	24.2	30.4	33.7	5.25	3.59
<i>Amak</i> centers								
Choirbalsan	19.3	28.5	45.3	1.6	1.8	2.2	3.97	4.74
Olgu	11.9	18.7	26.9	1.0	1.2	1.3	4.62	3.70
Hovd	13.5	17.5	24.9	1.1	1.1	1.2	2.63	3.59
Ulaangom	10.6	17.9	23.5	0.9	1.1	1.1	5.38	2.76
Moron	11.2	16.5	22.4	0.9	1.0	1.1	3.95	3.10
Tsetsereg	12.9	14.9	21.7	1.1	0.9	1.1	1.45	3.83
Bayanhongor	11.4	15.6	21.4	1.0	1.0	1.0	3.19	3.21
Uliastai	11.4	16.3	21.0	1.0	1.0	1.0	3.64	2.57
Suhbaatar	10.0	14.3	20.2	0.8	0.9	1.0	3.64	3.51
Altai	10.0	13.8	19.3	0.8	0.9	0.9	3.27	3.41
Arvaiheer	9.4	12.3	17.5	0.8	0.8	0.9	2.73	3.59
Baruun-Urt	8.0	11.6	16.5	0.7	0.7	0.8	3.79	3.59
Mandalgov	6.4	10.2	16.0	0.5	0.6	0.8	4.77	4.60
Zuunmod	7.1	9.8	15.9	0.6	0.6	0.8	3.28	4.96
Odorhaan	7.7	11.1	15.3	0.6	0.7	0.7	3.72	3.26
Dalanzadgad	6.6	10.0	14.8	0.6	0.6	0.7	4.24	4.00
Zuunharaa	8.1	11.4	14.3	0.7	0.7	0.7	3.48	2.29
Bulgan	9.8	11.3	13.9	0.8	0.7	0.7	1.43	2.09
Sainshand	8.3	11.1	11.8	0.7	0.7	0.6	2.95	0.61
Total	193.6	272.8	382.6	16.2	17.0	18.6	3.49	3.44
Other urban centers	43.1	59.3	93.3	3.6	3.7	4.6	3.24	4.64
Total	1,197.6	1,595.0	2,044.0	100.0	100.0	100.0	2.91	2.51
Urban	527.4	817.0	1,166.1	44.0	51.2	57.0	4.47	3.62
Rural	670.2	778.0	877.9	56.0	48.8	43.0	1.50	1.22

Note: There may be some discrepancies in totals due to rounding.
Source: 1969, 1979, and 1989 Censuses of Mongolia.

urbanization. The criteria used to define a place as urban are based on the economic activity of its population. Any permanent settlement in which at least three-quarters of the working-age population is engaged in nonagricultural activities is considered urban.

Mongolia is currently divided into 21 administrative units: 18 *aimaks* and three autonomous cities.⁵ As mentioned, each *aimak* has a center or capital. In addition to these urban units, there are a number of small cities and towns, most of them the administrative centers of the rural districts, called *sum*. By 1989, all the *aimak* capitals had populations of more than 10,000. Zuunharaa was the only location with more than 10,000 inhabitants that was not an autonomous city or *aimak* center. Because of its size, it is included together with the other urban units in Table 1.

According to the data presented in Table 1, urbanization has been significant and quite rapid in Mongolia. The current urban population constitutes more than half of the total population. One-third of the total population is concentrated in the three largest cities, each with more than 50,000 inhabitants. Annual population growth in urban areas was three times the rate in rural areas in both 1969–79 and 1979–89. In Darhan and Erdenet, the increase was exceptionally high. These data suggest that migration has been a major component of urban population growth. The specific role of migration will be discussed in greater detail in later sections of this paper.

Noteworthy also is the decline in the pace of growth during 1979–89 compared with the earlier decade. In part, this reflects a decline in natural increase, stemming from the fall in fertility during the 1980s. However, the decline in the pace of growth of the urban population was also caused by a decline in migration. This change appears to be related

5. Mongolia's three largest urban places—Ulaanbaatar, Erdenet, and Darhan—are classified as autonomous cities for administrative purposes. In this report, they are usually referred to simply as cities, as are other urban places, such as *aimak* centers and *sum*, even though many of these smaller places might more properly be termed towns.

to the mounting economic problems that the country began to experience during the 1980s. Industrial investment was substantially reduced, with a consequent slowdown in the pace of urban job creation.

The overall decline in urban population growth is attributable to the slower growth of the three autonomous cities. In the aggregate, the *aimak* centers continued to grow at about the same rate in both decades. The annual rate of population growth in other urban places actually increased during 1979–89 compared with the rate estimated for the previous decade.

Fertility decline in these places may have been less significant than in larger urban localities. However, the main explanation appears to be that most of these localities do not depend economically on the industrial activities that declined substantially during the 1980s. They therefore continued to attract migrants who were absorbed in the expanding service-related and administrative work force.

The rapid population growth of urban areas boosted the demand for housing, education, and health facilities. This led to sustained government investment in housing, which in some years reached more than 20 percent of total government investment (Milne et al. 1991). In all urban localities, physical expansion was rigorously planned. Dwellings ranged from pre-World War I, conventionally built, low-rise structures to 12-story apartment blocks with full services, including central heating. The government treated housing as a highly subsidized social service similar to health or education services.

Nevertheless, demand for housing outstripped supply. The problem was solved by using the *ger* or *yurt*, the traditional Mongolian dwelling tent. These are portable round tents, usually made of felt, which can accommodate a family of four. Mongolian cities are usually surrounded by encampments of *ger*. In some cities, as much as 70 percent of the population lives in this type of housing (Habitat 1992; United Nations 1993a, 1993c). All categories of human settlement in Mongolia, from the capital to *sum* centers, exhibit a

typical pattern of division between formal government housing and *ger* encampments.

The *ger* has been the traditional dwelling of Mongolians from ancient times, so its use in urban areas is not defined by most government officials as a social problem. To some extent, *ger* areas in Mongolian cities resemble the shanty towns surrounding cities in other developing countries. Although *ger* encampments do not have the normal level of public services (piped water, sewerage, and central heating), the vast majority of their residents cannot be considered marginal since they tend to have formal employment in the urban economy and access to most available social services, such as education and health care. In addition, *ger* occupants represent a cross-section of income and occupational groups. *Ger* areas, especially in the largest cities and *aimak* centers, are officially designated by the municipal government, which exercises a degree of control and supervision of plot layouts. The land is provided rent free. In these areas, *ger* are rapidly being replaced or supplemented by self-built, rectangular, pitched-roof houses that are constructed from timber or masonry and contain one or two rooms. Their construction is the full responsibility of the owner-occupant, whether involved in the work personally or using casually contracted labor.

POPULATION DISTRIBUTION BY CITY SIZE

We turn next to an examination of population distribution by size classes of cities in 1969, 1979, and 1989 (Table 2). Only one city, Ulaanbaatar, fell into the largest size category of 100,000 and over. In 1969, no city belonged to the second largest size class, of 50,000 to 100,000, but Darhan moved to that category in 1979, and Erdenet followed in 1989. Darhan had only 23,000 inhabitants in 1969, and Erdenet did not exist at all; by 1979 Darhan had 51,000 inhabitants, and Erdenet had 32,000. The 19 cities that were in the 10,000 to 20,000 and the 20,000 to 50,000 categories in 1989 were mainly *aimak* centers. The smallest two classes (under 10,000 and

10,000 to 20,000) included urban areas that emerged with the growth of cooperative farming and the government's attempts to link isolated rural localities to the national economy. Some of them were *sum* centers serving rural districts distant from the provincial capitals. In 1989, the population living in these places comprised only 12.2 percent of the national total.

Tables 1 and 2 suggest that between 1969 and 1989 urbanization was centered mainly in places that could be considered medium-sized cities, with populations of 20,000 to 100,000. The population living in these urban places accounted for only 4.4 percent of total urban population in 1969 but had increased to 31.7 percent of the total by 1989. By contrast, the percentage of the urban population living in towns of less than 20,000 declined from 44.9 percent to 21.3 percent during the same period. This decline, along with the negative annual rate of growth observed among the smallest

Table 2. Population distribution by size of locality, Mongolia, 1969, 1979, and 1989

Indicator	Categories of locality size					Total
	Less than 10,000	10,000-19,999	20,000-49,999	50,000-99,999	100,000 and over	
Number of cities						
1969	34	10	1	0	1	46
1979	39	17	2	1	1	60
1989	34	10	9	2	1	56
Population (000s)						
1969	114.5	122.2	23.3	0.0	267.1	527.1
1979	69.1	234.5	60.4	50.7	402.3	817.0
1989	93.3	155.3	227.3	141.8	548.4	1,166.1
Percentage of total population						
1969	9.3	10.2	1.9	0.0	22.3	43.7
1979	4.3	14.7	3.8	3.2	25.2	51.2
1989	4.6	7.6	11.1	6.9	26.8	57.0
Percentage of urban population						
1969	21.7	23.2	4.4	0.0	50.7	100.0
1979	8.5	28.7	7.4	6.2	49.2	100.0
1989	8.0	13.3	19.5	12.2	47.0	100.0
Annual rate of growth						
1969-79	-4.92	6.74	9.99	-	4.17	4.47
1979-89	3.05	-4.04	14.17	10.28	3.15	3.62

Source: 1969, 1979, and 1989 Censuses of Mongolia.

two size classes, does not mean that all the towns in these categories lost population; rather, it reflects the reclassification of many of them into larger size categories.

The proportion of the urban population living in Ulaanbaatar declined slightly, from 50.7 to 47.0 percent, between 1969 and 1989. This redistribution of population over the 20-year period indicates that intermediate city growth has countered a pattern of urbanization in which population was concentrated almost exclusively in the primate city.

If the four-city primacy index is used to assess Ulaanbaatar's primacy status within Mongolia, the results point to a sharp decline in the capital city's dominance of the urban hierarchy. In 1969, Ulaanbaatar was 4.77 times as large as the aggregated population of the next three largest cities, a strong level of primacy. Reflecting the growth of the smaller cities, this index declined to 3.62 in 1979 and 2.93 in 1989. Yet even this 1989 primacy index is higher than that of Seoul (1.35), Jakarta (1.37), and Karachi (1.14). Mongolia's high primacy reflects the country's early stage of development and urbanization, as well as its small total population (2 million), which is less than that of many of the large cities of other Asian nations.

Despite its reduced primacy during the period under consideration, Ulaanbaatar experienced rates of population growth well above the national rate, suggesting the persistence of significant in-migration. However, the migration flow to the medium-sized cities was even more important, accounting for a substantial increase in their share of total urban population. In-migration accounted for more than half of the rapid growth of medium-sized cities during the 1980s, in contrast to Ulaanbaatar, where in-migration was responsible for only one-fourth of population growth.

Rates of natural increase were similar for the capital and other cities. Between 1979 and 1989, the average annual rate of natural increase was 2.8 percent in the *aimak* capitals, 2.6 percent in Darhan, 2.8 percent in Erdenet, and 2.4 percent in Ulaanbaatar.

Table 3 shows changes in the distribution of urban

places by size category between 1969 and 1979 and between 1979 and 1989. Several towns of less than 10,000 population emerged during both periods—20 during 1969–79 and 12 during 1979–89. Intermediate cities also grew in importance during these decades. During 1969–79, eight urban places shifted upward from the smallest size category into the 10,000 to 20,000 class. In the following decade, the number of intermediate cities (20,000 to 50,000) increased again because of movement up the hierarchy of size categories. During these two decades, many other urban localities remained in the same size category, while others “disappeared.” Most of these were *sum* centers

The emergence and growth of small urban places in

Table 3. Changes in the distribution of localities by size categories: Mongolia, 1969–79 and 1979–89

Changes 1969-79	Size of locality in 1979					Total
	Less than 10,000	10,000-19,999	20,000-49,999	50,000-99,999	100,000 and over	
Became urban	20	0	1	0	0	21
Moved from smaller to larger size class	-	8	1	1	0	10
Moved from larger to smaller size class	0	0	0	0	0	0
Remained in the same size class	19	9	0	0	1	29
Disappeared	4	0	0	0	0	4
Total	43	17	2	1	1	64

Changes 1979-89	Size of locality in 1989					Total
	Less than 10,000	10,000-19,999	20,000-49,999	50,000-99,999	100,000 and over	
Became urban	12	0	0	0	0	12
Moved from smaller to larger size class	-	1	8	1	0	10
Moved from larger to smaller size class	1	0	0	0	0	1
Remained in the same size class	21	9	1	1	1	33
Disappeared	12	0	0	0	0	12
Total	46	10	9	2	1	68

Source: 1969, 1979, and 1989 Censuses of Mongolia

Mongolia appear to be linked to expansion of productive activities in the collective where they are located and to central decisions to transform them into important administrative or service centers. Some grew and were classified as urban localities because more than two-thirds of their economically active population was engaged in nonagricultural activities. While significant population growth occurred in some *sum* centers that were classified as urban, others lost their regional importance and even their status as urban places. Contributing factors were economic problems, the emergence of a competing center, or the transfer of activities to the *aimak* center or to another *sum* center. As a result, the proportion of the economically active population in nonagricultural activities may have declined and led to loss of a center's urban status.

The pattern of population distribution in any country is determined by a wide range of factors. These include geography, history, type and location of economic activity, and the direct and indirect impact of policy decisions (United Nations 1993d; Kasarda and Parnell 1993). In Mongolia, the most important factors have been sociopolitical, particularly the influence of the government. The pattern of population distribution and urbanization has been strongly affected by the objectives established in successive five-year plans and by the policies adopted to achieve those objectives. Industrialization, collectivization, and the transformation into a modern industrial-agricultural society within the context of a command economy—these goals are closely related to the population-distribution policies adopted by the government and therefore to urbanization.

**MONGOLIA'S
URBAN GROWTH:
VARIATION BY
SIZE CATEGORY**

Our analysis suggests that urbanization in Mongolia during the past two decades was mainly the result of the expansion of two types of urban localities: the capital city and medium-sized cities, which, in turn, can be divided into the two industrial cities (Darhan and Erdenet) and the *aimak* centers. These three types of urban localities will be examined in more detail.

THE CAPITAL CITY ULAANBAATAR

The evolution of Ulaanbaatar is unique. For about 100 years, the city was a massive caravan, shifting locations more than 20 times before establishing its present location. This "sedentarization" of Mongolia's capital occurred in 1778. Ulaanbaatar has been the capital of Mongolia since then, first as Urgoo and then as Khuree; it received its current name only in the 1920s. By the early twentieth century, it had become the main center of secular and religious life in the country, with more than 100 monasteries and temples, about 600 shops, 350 artisan workshops, and many large trade establishments. Crude estimates suggest that the city's permanent population at that time was approximately 20,000 (Mongolia, Academy of Sciences 1990).

In a country such as Mongolia, with its highly dispersed and mobile population, early industrialization efforts were naturally concentrated in the capital. After the 1940s, Ulaanbaatar experienced substantial physical expansion and rapid population increase. The official borders of the city were established in 1954 under its first urban development plan, and its territory has not changed since then. Ulaanbaatar is divided into three zones: the city proper; the surrounding districts within the city's territory; and two satellite towns outside the territory but linked to the city administratively. Both satellite towns are coal-mining enclaves. Because of their proximity to Ulaanbaatar and their nonagricultural economic base, they have been considered a part of the capital since 1954.

By 1969, Ulaanbaatar's population numbered 267,400. According to census information, Mongolia's overall annual population growth rate was 2.7 percent between 1956 and 1969, while Ulaanbaatar grew by 6.5 percent annually. This difference points to in-migration as the major component of the city's growth. These figures must be interpreted with caution, however, because they provide only an approximate indicator of the volume of migration and also because the censuses before 1969 are suspected of underenumeration

problems. The continuing differences between national rates of population growth and the growth of Ulaanbaatar suggest that in-migration continued to be important through the 1970s and 1980s. By 1989, the city's population had increased to 548,393, including 502,452 in the city proper, 9,439 in the surrounding districts, and 36,502 in the satellite mining towns.

The Mongolian censuses do not include questions on place of residence 5 or 10 years before the census date, so it is not possible to measure migration in particular time periods. Instead, we must rely on migration information collected through use of a question on place of birth. Such information does not allow us to determine when a move occurred; it is useful, however, in providing insights into the cumulative impact of migration and the direction of movement. Using such data, Table 4 documents the important role of migration in population growth in Ulaanbaatar. More than 40 percent of the population enumerated in the capital during the 1989 census was lifetime in-migrants, that is, not born in Ulaanbaatar. By contrast, only 13.2 percent of the population born in Ulaanbaatar was enumerated in other *aimaks* or cities in the 1989 census. Nonetheless, the percentage of the population born in the capital exceeded the percentage of in-migrants, suggesting that natural increase,

Table 4. Lifetime migration. Ulaanbaatar

Origin of residents	Number (000s)	Percentage of total population	Percentage of in-migrants
Born in Ulaanbaatar	311.7	56.8	-
Born outside Ulaanbaatar	236.7	43.2	100.0
Born in			
Other autonomous city	3.6	0.7	1.5
<i>Aimak</i> center	37.9	6.9	16.0
Other	195.2	35.6	82.5
Born in Ulaanbaatar but			
living elsewhere ^a	47.5	15.2	-
Total population	548.4	100.0	-

a. Population born in Ulaanbaatar and living in other places as percentage of the total population born in Ulaanbaatar

Source: 1989 Census of Mongolia

including children born to in-migrants after they arrived in the city, contributed importantly to Ulaanbaatar's growth, at least during these two decades

The substantial in-migration to Ulaanbaatar from rural areas suggests that the organization of agricultural production into collective and state farms did not provide enough attractive jobs to absorb the natural population increase in the countryside. Collectivization, introduction of crop farming, and modernization of agricultural activities restructured rural labor demand. These changes, together with rapid population growth resulting from high fertility rates and declining mortality, created a population excess in rural areas relative to economic opportunities. Many were willing to move to cities and towns in search of better employment opportunities. Although supporting data are unavailable, urban areas, especially the capital, also likely provided better economic opportunities and a higher standard of living than did rural areas undergoing collectivization.

It seems paradoxical to assert that a country as vast as Mongolia, with 80 percent of its territory suitable only for extensive livestock production and with one of the lowest population densities on earth, is characterized by excess rural population. However, the natural growth of the economically active rural population appears to have been more rapid than the labor demands generated by the new mode of agricultural organization. More dynamic growth in the agricultural sector might have absorbed a larger proportion of the ever-increasing rural labor supply, but agricultural production increased only modestly. For example, between 1960 and 1990, the total number of livestock increased from 23 million to 26 million, that is, by only 13 percent. During the same period, the number of animals per capita decreased from 23.8 to 12.0, a decline of almost 50 percent. The per capita production of meat declined from 193.7 kilograms in 1960 to 119.9 in 1990 (Mongolia, State Statistical Office 1991). The stagnation of the rural economy illustrated by these figures took place in spite of a huge market for Mongolian meat products in the Soviet Union and in the socialist countries of

Table 5. Decomposition of annual rates of growth: Ulaanbaatar, 1969-79 and 1979-89

Growth indicator	1969-79	1979-89
Absolute increase (000s)		
Total	134.9	146.1
Natural increase	84.3	112.9
Net migration	50.6	33.2
Annual rate of increase (%)		
Total	4.2	3.1
Natural increase	2.6	2.4
Net migration	1.6	0.7
Percentage contribution		
Total	100.0	100.0
Natural increase	62.5	77.3
Net migration	37.5	22.7

Source: 1969, 1979, and 1989 Censuses of Mongolia and unpublished data from the State Statistical Office.

Eastern Europe. Collectivization may have actually impeded the expansion of agricultural production.

The 1989 census was the first to include a question on place of birth, but registration of vital events, which began in the 1950s, provides data on deaths and births, especially in urban areas where the registration process is almost complete.⁶ Net intercensal migration for Ulaanbaatar can be estimated as the difference between total and natural growth (Table 5). Unfortunately, vital statistics are not available to measure differences between overall natural increase in urban and rural areas and, by residue, the extent of net migration. Such statistics were tabulated only for the three largest cities and the *aimak* centers.

The data for Ulaanbaatar confirm that natural increase has been the main determinant of the city's growth since 1969; conversely, in-migration is making a diminishing contribution. This trend is the result of both a decline in in-migration and an increase in natural population growth. The absolute number of persons gained from migration declined

6. Estimates of vital registration and census accuracy are available for Mongolia (Neupert 1992). For the estimates of net migration in this study, underregistration of births and deaths as well as census population undercounts were taken into account.

from 50,600 to 33,200 between 1969-79 and 1979-89. Natural increase amounted to 84,300 during the first decade and 112,900 during the second, accounting for 63 percent and 77 percent, respectively, of the city's total population growth. Again, some of this natural increase undoubtedly reflects the postmigration fertility of in-migrants, with a high proportion concentrated in reproductive ages. Unfortunately, data limitations preclude measurement of this secondary effect of migration. An analysis that could have disaggregated natural increase of migrants and natives would have provided a more complete picture of the contribution of migration to the city's growth (Martine 1972).

In the currently developed countries, city growth and urbanization in the nineteenth century were attributable almost exclusively to in-migration from rural areas. In most less-developed countries, urbanization occurred at a much more rapid pace, especially in national capitals or other primate cities. Although in-migration was substantial, natural increase was the main component of the transformation (Merrick 1986). Constant or even rising fertility rates in an ever-increasing population of childbearing age, coupled with improved medical control over mortality, resulted in high rates of natural increase. These overshadowed the still considerable influx of migrants from rural areas or secondary cities.

Mongolia follows the general pattern observed in most less-developed countries. Although declining, fertility was still high in Ulaanbaatar well into the 1980s. Because of the young population, due to the high fertility rates of previous decades, the number of births continued to increase. During the 1970s, the total fertility rate in the capital was more than 5 children per woman, whereas during the 1980s it was approximately 4.4. However, approximately 121,000 births were registered in the city in the 1970s, compared with 154,000 in the 1980s.

The decline in net in-migration rates for Ulaanbaatar is certainly related to the expansion of the industrial cities of Darhan and Erdenet. It may also be partly the consequence of the nation's mounting economic problems during the

1980s. In 1984, the Eighth Five-Year Plan (1985–90) was reviewed, and major modifications were introduced. The plan sought to increase agricultural production, improve food supplies, expand electrification, and create a metalwork sector. Some investment was redirected from large-scale projects to the social sector and small industrial projects. As a result, the pace of industrialization declined dramatically. Between 1970 and 1980, investment in the industrial sector increased almost threefold. Between 1980 and 1985, it increased by only 26 percent, and between 1985 and 1990, it declined by approximately 25 percent (Milne et al. 1991). Labor demand in urban areas declined drastically, especially during the second half of the 1980s.

Despite the overall decline in urban in-migration during the 1980s, Ulaanbaatar continued to receive the largest absolute number of in-migrants of any urban location. As in other less-developed countries, the capital city has played a striking role in urbanization and the evolving urban structure. According to the 1989 census, the city accounted for 26.8 percent of Mongolia's total population. Nevertheless, Ulaanbaatar's share of Mongolia's total urban population decreased slightly, from 51 percent in 1969 to 47 percent in 1989. Moreover, the capital city's contribution to Mongolia's total urban growth decreased from 47 percent during 1969–79 to 42 percent during 1979–89. This has certainly been the result of an explicit government policy to deconcentrate industrial development and to redirect rural out-migration to alternative urban places.

THE INDUSTRIAL CITIES OF DARHAN AND ERDENET

Mongolia has two other locations that have autonomous city status: Darhan and Erdenet. Both were developed as urban centers after 1960 as a result of explicit government policy. Since their classification as cities, they have experienced remarkable growth. Nonetheless, by 1989 they accounted for a small proportion of Mongolia's total population—only 4.2 percent for Darhan and 2.7 percent for Erdenet (Table 1). Even

their shares of the total urban population were modest, 7.3 percent for Darhan and 4.8 percent for Erdenet.

Darhan, located 219 kilometers north of Ulaanbaatar, became an autonomous city in 1962. In the following five years, it became the second largest city in the country and a major industrial center. Industrialization began with large leather- and fur-processing plants. Later, factories were established for construction materials and garments as well as diverse light industries. The government strongly encouraged migration to provide the necessary labor force for infrastructure development and the emergent industries. As a result, between 1969 and 1979, the population increased at an astonishing rate of 8.1 percent per year (Table 1). During 1979–89 the annual rate of population growth declined to 5.4 percent, but this was still well above the national rate.

The development of an industrial complex in Darhan was the result of an explicit policy to avoid excessive concentration of industrial activities in Ulaanbaatar. The policy cannot, however, be considered an effort to promote regional development. More strategic considerations were paramount. The site for Darhan was selected mainly because of its location near the border with Russia, Mongolia's main trading partner, and on the route of the Trans-Mongolian railway.

Erdenet, located 371 kilometers northwest of Ulaanbaatar, became the nation's third largest city by the end of the 1970s, overtaking Chorbalsan. The emergence of Erdenet as a new city in the mid-1970s is directly related to a huge Mongolian-Soviet joint mining venture to exploit rich deposits of copper and molybdenum. Before establishment of the new city, there was no settlement at this place. Migration to Erdenet was encouraged, and an official program was designed to organize the movement. In addition to mining and mineral-processing activities, some textile and food-processing industries were created specifically to provide jobs for the families of mine workers. Between 1979 and 1989, Erdenet experienced an average annual rate of population growth of 5.8 percent.

Clearly, in-migration has played an important role in the expansion of both Darhan and Erdenet. In Darhan, more

than half the population counted in the 1989 census was born outside the city. In Erdenet, however, the proportion was more than two-thirds, partly reflecting this city's more recent development (Table 6). In both cities, about 70 percent of all non-natives were of rural origin.

The important role of migration in these cities' population growth is not surprising since the official economic plans aimed to develop them into major industrial centers in a short time. To supply the necessary labor force, in-migration was encouraged by government propaganda directed mainly to young couples, promising employment for both husband and wife, salary incentives, and housing. Perhaps more surprising is the relatively high proportion of nonmigrants in both cities. After less than three decades, one-third of the population of Darhan was locally born. Less than two decades after Erdenet was founded, almost one-quarter of its population was locally born.

Table 6. Lifetime migration. Darhan and Erdenet

Origin of residents	Number (000s)	Percentage of total population	Percentage of in-migrants
Darhan			
Born in Darhan	28.5	33.3	-
Born outside Darhan	57.2	66.7	100.0
Born in:			
Other city	8.7	10.2	15.2
<i>Aimak</i> center	8.6	10.0	15.0
Other	39.9	46.6	69.8
Born in Darhan but living elsewhere ^a	7.4	26.0	-
Total population	85.7	100.0	-
Erdenet			
Born in Erdenet	12.4	22.1	-
Born outside Erdenet	43.7	77.9	100.0
Born in:			
Other city	6.0	10.7	13.7
<i>Aimak</i> center	6.0	10.7	13.7
Other	31.7	56.5	72.5
Born in Erdenet but living elsewhere ^a	2.0	16.1	-
Total population	56.1	100.0	-

^a Population born in Darhan or Erdenet and living in other places as a percentage of the total population born in Darhan or Erdenet

The important contribution of natural increase to population growth was probably due in large part to the fertility of in-migrants, many of whom were young couples at peak reproductive ages. In Darhan and Erdenet, as in Ulaanbaatar, the highest age-specific fertility rates were for women aged 20-24 and 25-29. Between one-fifth and one-quarter of women in these groups bore children during 1984-89, and even higher proportions bore children in earlier periods. Unfortunately, information is not available that would make it possible to estimate the specific contribution of in-migrants to the high levels of natural increase.

Decomposition of annual growth rates shows that migration was the main component of population growth in Darhan in 1969-79, data for Erdenet are available only for 1979-89. In both cities during this second decade, migration and natural increase made similar contributions to population growth (Table 7). In Darhan, the absolute number of persons gained through net migration rose, but the share of natural increase in total population growth rose even faster. In Erdenet, natural increase accounted for almost half of population growth, reflecting the recent development of the city, the significant number of young couples among the in-migrants, and the high fertility rates.

Fertility levels in these two urban areas remained high in the 1970s and 1980s, despite a fertility decline in Mongolia as a whole. For 1984, the total fertility rate was 4.0 children per woman in Darhan and 4.8 in Erdenet. The significant contribution of natural increase to population growth in these two cities reflects the large number of Mongolians in reproductive ages as a result of the extremely high fertility that prevailed during the 1950s and 1960s, and also the compounding effect of age-selective migration. Between 1979 and 1989, the number of women in the reproductive age range of 20-44 years increased by 56 percent in Mongolia as a whole. During the same 10-year period, this group increased by 66 percent in Ulaanbaatar, not much higher than the national level, but the number of women age 20-44 increased by 197 percent in Darhan and by 236 percent in Erdenet.

Like the nation as a whole, these two cities experienced declining fertility rates combined with an increase in the absolute number of births as a result of past high fertility levels. For example, an average of 1,500 births per year was registered in Darhan during 1969–79. During the following decade, the annual average was 2,200. Much of this increase reflects the growth in the city's population—from 23,300 in 1969 to 85,700 in 1989—and a parallel rise in the number of women in reproductive ages.

There was also an inflow of men in the reproductive age groups. Judged by the overall gender composition of

Table 7. Decomposition of annual rates of growth: Darhan and Erdenet, 1969–79 and 1979–89

Growth indicator	1969–79	1979–89
Darhan		
Absolute increase (000s)		
Total	27.4	35.0
Natural increase	9.6	16.6
Net migration	17.8	18.4
Annual rate of increase		
Total	8.1	5.4
Natural increase	2.8	2.6
Net migration	5.3	2.8
Percentage contribution		
Total	100.0	100.0
Natural increase	35.0	47.4
Net migration	65.0	52.6
Erdenet^a		
Absolute increase (000s)		
Total	-	24.2
Natural increase	-	11.5
Net migration	-	12.7
Annual rate of increase		
Total	-	5.8
Natural increase	-	2.8
Net migration	-	3.0
Percentage contribution		
Total	-	100.0
Natural increase	-	47.5
Net migration	-	52.5

a There are no data for Erdenet for the period 1969–70 because the city was only founded in the mid 1970s

Source: 1969, 1979, and 1989 Censuses of Mongolia and unpublished data from the State Statistical Office

Mongolia's three largest cities, migration does not appear to have been sex-selective. The sex composition of these urban populations was quite similar to that of the country as a whole. Only in Ulaanbaatar was the sex ratio lower for the 20-44 age groups, at 95 males per 100 females, suggesting some overrepresentation of women in the movement to the capital.

In contrast, the population age structure in Darhan and Erdenet, and to a less extent in Ulaanbaatar, deviated somewhat from the national pattern. About 11 percent of Mongolia's population was age 50 and older; the proportion was similar for Ulaanbaatar. By contrast, only 7.7 percent of Darhan's and 6.8 percent of Erdenet's populations were in this age group. The typically peak migration ages of 20-34 years comprised only 24.9 percent of Mongolia's total population, but 27.7 percent of Ulaanbaatar's, 28.5 percent of Darhan's, and 31.9 percent of Erdenet's, again pointing to the greater impact of migration in the two smaller cities.

As in Ulaanbaatar, the vast majority of in-migrants to Darhan and Erdenet came from rural areas. This is consistent with overall government policy goals to develop a dynamic urban industrial sector that will serve as the main generator of economic growth and employment in Mongolia, with investment in the agricultural sector considered secondary. The creation of these two cities and the origin of their migrant population are a result of such policy decisions.

THE *AIMAK* CENTERS

The economic plans and population-redistribution policies of the 1960s gave the *aimak* centers the function of providing close links with their surrounding rural areas and, at the same time, representing the central government at the provincial level. These provincial capitals were to serve as administrative, political, and service centers for their hinterlands. They played a major role during the process of collectivization and, subsequently, in managing and administering the government's economic and social plans at the local

level. Some already existed as small towns before the 1950s, but most were planned and developed later. By 1989, all the *aimak* centers had more than 10,000 inhabitants. Except for the three major cities of Ulaanbaatar, Darhan, and Erdenet, only one other city that is not an *aimak* center, Zuunharaa, had achieved this size and had thereby qualified as an urban center.

The role of the provincial capitals was closely related to the development of the agricultural sector; they were not intended to become industrial centers. Nonagricultural activities were to be limited to the provision of services and support to agriculture. Nonetheless, some industries were established, especially in wood processing, wool washing, and meat processing. This was mainly to take advantage of proximity to raw materials (Mongolia, Academy of Sciences 1990). Data are not available on social and economic conditions in these smaller urban centers, either individually or in the aggregate.

In-migration to the *aimak* centers has been a significant component of their population increase (Table 8). In 1989, the proportion of migrants in their aggregate population was 48.6 percent. As in the three largest cities, the vast majority of in-migrants—90.2 percent—were of rural origin. These patterns are not surprising since most of the provincial capitals are planned cities that initially had to rely on in-migration to increase their populations and fulfill the role for which they were created. Unfortunately, it is not possible to obtain data on out-migration, but the number of in-migrants to the three autonomous cities who were born in *aimak* centers suggests that out-migration from *aimak* centers has also been substantial (see Tables 4 and 6). According to the 1989 census, 37,900 in-migrants to Ulaanbaatar, 8,600 in-migrants to Darhan, and 6,000 in-migrants to Erdenet came from *aimak* centers. Thus, in 1989, a total of 52,500 persons born in provincial capitals, equivalent to 13 percent of the 1989 *aimak* population, were living in one of the three largest cities: most were in the national capital.

Although most of the *aimak* centers were created

recently and have relied heavily on in-migration for their population increase, the percentage of the population locally born is quite high. This suggests that natural population growth, reflecting the combined effects of a high concentration of women in reproductive ages and high fertility levels, constitutes a major component of growth, and one that is likely to increase in importance.

Because of data limitations, decomposition of the annual growth rates of *aimak* centers into natural increase and net migration is possible only for 1979-89 (Table 9). In general, population growth in the *aimak* centers depended mainly on natural increase during the decade: the average rate of increase was similar to that of Ulaanbaatar, Darhan, and Erdenet. Although in-migration was crucial to the creation

Table 8. Lifetime migration: *aimak* centers

<i>Aimak</i> center	Total population (000s)	Born in <i>aimak</i> center (%)	Born elsewhere (%)	Total (%)	Origin of in-migrants			Total (%)
					City ^a (%)	<i>Aimak</i> center (%)	Other ^b (%)	
Choirbalsan	45.3	54.1	45.9	100.0	5.2	3.7	91.1	100.0
Olgi	26.9	u	u	u	u	u	u	u
Hovd	24.9	55.4	44.6	100.0	5.6	2.4	92.0	100.0
Ulaangom	23.5	60.3	39.7	100.0	2.5	1.3	96.2	100.0
Moron	22.4	51.8	48.2	100.0	5.6	2.4	92.0	100.0
Tsetserleg	21.7	54.1	45.9	100.0	5.2	3.7	91.1	100.0
Bayanhongor	21.4	48.5	51.5	100.0	4.1	2.0	93.9	100.0
Uliastai	21.0	52.4	47.6	100.0	3.0	2.6	94.4	100.0
Suhbaatar	20.2	u	u	u	u	u	u	u
Altai	19.3	47.9	52.1	100.0	3.6	3.6	92.8	100.0
Arvaiheer	17.5	45.8	54.2	100.0	5.6	3.4	91.0	100.0
Baruun-Urt	16.5	59.9	40.1	100.0	5.6	2.8	91.6	100.0
Mandalgov	16.0	48.5	51.5	100.0	7.0	4.7	88.2	100.0
Zuunmod	15.9	45.2	54.8	100.0	16.1	6.7	77.2	100.0
Odorhaan	15.3	43.9	56.1	100.0	8.4	9.1	82.5	100.0
Dalanzadgad	14.8	47.3	52.7	100.0	8.2	3.6	88.2	100.0
Zuunharaa	14.3	u	u	u	u	u	u	u
Bulgan	13.9	57.1	42.9	100.0	10.5	3.8	85.6	100.0
Sainshand	11.8	40.6	59.4	100.0	9.0	7.2	83.8	100.0
Total	382.6	51.4	48.6	100.0	6.1	3.7	90.2	100.0

u—unavailable

a Refers to Ulaanbaatar, Darhan, and Erdenet

b All other urban and rural places

Source: 1989 Census of Mongolia

and early growth of these cities, the fertility of the in-migrant population contributed strongly to subsequent natural increase. Migration itself has begun to play a diminishing role as natural increase has gained importance. This trend has been associated with an overall reduction in investment in *aimak* centers during the 1980s and with an expansion of the population in reproductive ages.

Population growth in these smaller urban centers has made a major contribution to urbanization in Mongolia, accounting for 27 percent of all urban growth between 1969 and 1979 and 32 percent between 1979 and 1989. Yet Ulaanbaatar, Darhan, and Erdenet together were responsible for far more of the urban increase, reflecting their function as key urban centers. Mongolia's three largest cities accounted for 67 percent of all urban growth in 1969-79 and 58 percent in 1979-89.

Table 9. Decomposition of annual rates of growth: *aimak* centers, 1979-89

<i>Aimak</i> center	Population (000s)		Absolute increase (000s)			Average annual rate of growth		
	1979	1989	Total	Natural increase	Migra-tion	Total	Natural increase	Migra-tion
Choirbalsan	28.5	45.3	16.8	9.3	7.5	4.74	2.62	2.13
Olgii	18.7	26.9	8.2	6.5	1.7	3.70	2.93	0.77
Hovd	17.5	24.9	7.4	5.9	1.5	3.59	2.89	0.70
Ulaangom	17.9	23.5	5.6	5.4	0.2	2.76	2.65	0.11
Moron	16.5	22.4	5.9	5.0	0.9	3.10	2.61	0.50
Tsetserleg	14.9	21.7	6.8	4.1	2.7	3.83	2.31	1.52
Bayanhongor	15.6	21.4	5.8	5.1	0.7	3.21	2.85	0.37
Uliastai	16.3	21.0	4.7	4.7	0	2.57	2.59	-0.02
Suhbaatar	14.3	20.2	5.9	5.0	0.9	3.51	2.99	0.53
Altai	13.8	19.3	5.5	4.2	1.3	3.41	2.58	0.83
Arvaiheer	12.3	17.5	5.2	4.1	1.1	3.59	2.82	0.76
Baruun-Urt	11.6	16.5	4.9	4.2	0.7	3.59	3.10	0.49
Mandalgov	10.2	16.0	5.8	3.5	2.3	4.60	2.76	1.84
Zuunmod	9.8	15.9	6.1	3.4	2.7	4.96	2.73	2.23
Dorhaan	11.1	15.3	4.2	3.5	0.7	3.26	2.73	0.53
Dalanzadgad	10.0	14.8	4.8	3.2	1.6	4.00	2.63	1.37
Zuunharaa	11.4	14.3	2.9	3.9	-1.0	2.29	3.10	-0.81
Gulgan	11.3	13.9	2.6	3.3	-0.7	2.09	2.63	-0.54
Ganshand	11.1	11.8	0.7	4.0	-3.3	0.61	3.50	-2.89
Total	272.8	382.6	109.8	88.3	21.5	3.44	2.76	0.68

—unavailable

Source: 1969, 1979, and 1989 Censuses of Mongolia and unpublished data from the State Statistical Office

Substantial differences in growth rates can be observed among individual *aimak* centers. Part of these differences can be attributed to different rates of natural increase. During 1979-89, significant differences in fertility levels and the pace of fertility decline characterized the provincial capitals. There were also marked differences in mortality rates. Total fertility rates ranged from 5.0 to 7.5 children per woman, and life expectancy at birth ranged from 57 to 64 years (Neupert 1993). On balance, however, the main source of variation in population growth among the *aimak* centers was net migration. With few exceptions, the rates of natural increase varied within a narrow range, from 2.5 percent to 2.9 percent (the highest rate was 3.5 percent), while net migration varied from -2.9 percent to +2.2 percent.

Unfortunately, there is no information on variables that can explain differences in net migration rates among *aimak* centers. Economic statistics such as per-capita gross agricultural product, agricultural productivity, per-capita manufactured product, or value added in the manufacturing sector are either not available at the *aimak* or *aimak*-center level or are not reliable. It is nonetheless possible to suggest some explanations.

The literature on urbanization and urban systems suggests a large number of factors that may account for the growth of particular urban centers within a given urban system (Eisenstadt and Shachar 1987). For example, according to the central place theory (Berry and Pred 1961), the rate of growth of an urban place is determined by the demand for goods and services in its hinterland. Alternatively, more economics-related approaches explain urban growth as determined by locally oriented economic activities and the magnitude of exports, irrespective of destination. By contrast, supply-oriented models relate the growth of cities to their ability to attract resources from outside (Eisenstadt and Shachar 1987).

Rondinelli and Ruddle (1976) stress that settlements in developing nations show a wide variety of spatial patterns that perform quite different functions and services. They point

out, however, that in many countries essential components of the spatial hierarchy, especially in the middle range, are missing, underdeveloped, or poorly distributed. With this in mind, they advocate "careful location of productive investments and social services at strategic points in the spatial system" (Rondinelli and Ruddle 1976, 76).

Envisaged is the creation and strengthening of three types of urban places in a dispersed but integrated pattern:

1. village service centers that cater to the social and economic needs of the rural population, including the stimulation of small-scale, nonagricultural development;
2. market towns and small cities that help transform economically lagging rural regions and link agricultural areas to large urban markets by developing storage and processing facilities, financial and commercial services, and social, health, educational, and administrative functions;
3. intermediate cities and regional centers, more heterogeneous in character, that provide higher-level bridges between smaller locations and the major urban center(s) and allow decentralization of activities that might otherwise be concentrated in the major city(ies)

The characteristics of the urban system in socialist countries depend heavily on administrative decisions closely related to strategies of planned development. Different types and intensities of productive activity, along with the necessary labor resources, are allocated in accordance with national economic plans that usually combine industrial and territorial considerations (Khorev and Moiseenko 1975). However, although the most general aspects of the spatial distribution of population may depend on administrative principles, more specific patterns appear to depend less on explicit policies than on spontaneous economic forces. For example, there is no evidence in Mongolia's five-year plans of an explicit population-redistribution policy designed to encourage in-migration to some *aimak* centers or to discourage in-migration to

others. Policies related to other development goals or decisions made outside official policy channels may have affected the relative attractiveness of different *aimak* centers to migrants. Differences in the rates of population growth among these urban centers appear to be related more to their economic and social characteristics than to direct administrative factors.

The agricultural sector has experienced major changes in Mongolia since the 1950s. Collectivization of all productive assets, some modernization of the livestock sector, introduction of mechanized crop farming, increases in productivity, and monetization of social relations are among the most relevant transformations. According to central place theory, we might expect that these transformations would lead to an increasing diversification of the demand for goods and services in rural areas and probably to an excess of labor because of increasing productivity. This in turn would affect the adjacent *aimak* centers.

Where the demand for services and the volume of commerce increased, economic expansion probably attracted rural out-migrants who regarded the *aimak* centers as alternative destinations to the more distant and migration-restricted capital and industrial cities. Thus the different growth patterns of the provincial capitals may well be related to the degree of development and modernization of their rural hinterlands. On the one hand, the process of rural economic growth and socioeconomic change in some *aimaks* may have led to rapid and substantial population growth in their capital cities. On the other hand, in some *aimaks* agricultural activities may have remained labor intensive, modernization less significant, and economic development more limited. Consequently, their urban centers would have experienced only moderate growth and limited in-migration or even negative net migration rates.

A major limitation of central place theory is that it ignores the internal growth-generating factors of the cities themselves. In some cases, these factors are important in the expansion of an urban center. In Mongolia the *aima*

centers have grown in response to the nonagricultural investments made by the central government. In some cities, industries were established in order to take advantage of proximity to natural resources or supplies of raw materials. The establishment of manufacturing enterprises and associated administrative and service activities in some centers would logically stimulate more population growth than in those centers where such developments did not take place. The development of other *amak* centers was based on proximity to mineral deposits, Soviet military facilities, appropriate sites to produce goods for export to the Soviet Union, or transportation links to the Soviets.

These two factors—development of the cities' rural hinterlands and the expansion of economic activity within the cities themselves—are not in conflict. In Mongolia the interaction of both factors helps to explain differences in growth rates and in the levels and direction of migration among the *amak* centers.

CONCLUSIONS

Since the 1920s, and especially after the 1950s, the Mongolian economy moved from a base of traditional pastoralism to a combination of industrial activities, sedentary livestock production, and crop farming. During the 1920s, Mongolia had a predominantly rural population with only a few small urban agglomerations. By 1990, almost 60 percent of the population was urban. 22 urban places had more than 10,000 inhabitants, and three had more than 50,000. Three major factors have been identified in this study as the main determinants of the level and pattern of urbanization: industrialization, collectivization in the agricultural sector, and official population-redistribution policies.

As in most countries, the first industries in Mongolia emerged in existing urban centers, especially in the capital city. Ulaanbaatar was the locus of most industrial activity. In an attempt to decentralize industrialization, the government adopted a strategy frequently followed in centrally planned economies—the creation of industrial complexes.

This is how the cities of Darhan and Erdenet came into existence. Industrial activities in other smaller cities, such as provincial capitals, have been more limited, but such activities also help to explain urban expansion.

Mongolia followed the model of collectivization implemented in the USSR and in the socialist countries of Eastern Europe. Despite some modernization in the livestock sector, agricultural production has increased only marginally since the early 1960s when collectivization was completed. At the same time, there has been rapid and sustained population growth in the rural areas as a result of declining mortality and high fertility.

Slow rural development resulted in an increasing surplus of rural labor, which led to rural-to-urban migration and absorption of in-migrants in the rapidly growing urban economy. The lower standard of living in rural areas appears to have been another determinant of movement to the cities. Although the standard of living of the rural population improved under collectivization compared with earlier conditions, economic opportunities and social conditions were better still in the cities. This was especially true for young adults educated in the vast network of provincial schools.

Collectivization has been a major determinant of the process of urbanization, not only because of its effect on rural out-migration, but also because it required the creation and development of regional urban centers. The implementation of Soviet-type five-year economic plans in Mongolia required a high degree of central control over the rural economy. The main role of the *aimak* centers was to reduce the distance, in administrative terms, between the collectives and the central government. The emergence and expansion of the provincial capitals are therefore directly related to the process of collectivization.

Administrative control of residence also had a major effect on the level and patterns of urbanization. Measures that restricted changes of residence were rather flexible, directed initially toward settling the pastoralist population. Later, as industrialization proceeded, residence policies were

used to direct rural out-migration to specific urban areas where labor resources were needed. Unlike the situation in China and other countries (Goldstein and Goldstein 1991), restrictions on mobility in Mongolia were not largely designed to inhibit migration, especially to a primate city. Rather, the policy was mainly intended to promote migration to specific urban locations.

This policy clearly reflects the overall economic strategy of the postwar Mongolian government: to establish a modern industrial and agricultural economy. The spatial distribution of the population in the 1950s conflicted with this goal. Extensive livestock production was considered inimical to the development of a modern agricultural sector within the framework of a centrally planned economy. At the same time, the small population in urban areas was insufficient to initiate and develop an industrial sector. Rural population was tied to the collectives, but as labor demand in urban areas increased, rural out-migration was not only permitted but actually encouraged.

The three factors posited here as the main determinants of urbanization have undergone substantial transformations since the 1980s, when Mongolia began the transition to a market economy. These transformations constitute a reversal of policies. Industrialization has almost stopped, privatization of agricultural activities is under way, and administrative restriction of movement has been eliminated. These changes are having and will have a major effect on the future of urban population growth and urbanization in Mongolia. Unfortunately, data on population redistribution trends since the 1989 census are generally not reliable or not available. Nevertheless, it is possible to venture some conjectures regarding the future, at least up to the turn of the century.

The *New York Times* (5 July 1992) reported that production in some sectors of the Mongolian economy fell by 50 to 80 percent between 1990 and 1992. Many factories were unable to obtain raw materials. Mongolia's exports plummeted by 55 percent in 1991 and continued to fall in 1992.

The cut-off in Russian aid resulted in a steep drop in the real income of most Mongolians, averaging 33 percent.

Industrial investment almost stopped after 1990. The former Soviet Union, main provider of financial and capital resources for industrial development, discontinued its assistance because of its own economic crisis. Internal resources were extremely limited, and the financial assistance received from other countries was used mainly to insure the functioning of the deteriorating economic and social infrastructure. The possibilities for foreign investment were modest, mainly because of limited infrastructure, lack of institutional capacity, and delay in establishing a clear and consistent legal framework. This situation may change, but it is very unlikely that a massive flow of foreign investment will be generated during the next 10 to 15 years. Therefore, significant new job creation is unlikely in urban areas.

Even if substantial industrial investment takes place, the resulting new employment opportunities are not likely to match the needs of the rapidly growing working-age population already living in urban areas—the large numbers born in the 1960s and 1970s. Thus there will be few if any extra jobs available in urban areas for rural in-migrants.

One of the most important economic and social transformations now taking place in Mongolia is the privatization of the agricultural sector. A real free-market agricultural sector is not yet established: the government still has a major influence in fixing prices and remains the major purchaser of agricultural products. Cooperatives and state farms still exist, and the land itself is state property, but private ownership of livestock and private agricultural enterprises are now not only permitted but even encouraged.

It is too soon to assess whether privatization will result in increased production or improved living conditions for the rural population. However, it is fairly safe to propose that two emerging characteristics of rural development will affect the adjustment to a market economy. First, substantial investments in agricultural development are not likely in the near future. Therefore, modernization of agricultural

activities will be quite limited, at least during the late 1990s and the following decade. Second, agricultural production, and in particular the livestock economy, will increasingly rely on independent family productive units and less on cooperatives or other forms of collective organizations. The official agricultural privatization plan encourages this type of organization, especially for animal production.

The Marxist principles of collectivization that provided an ideological cornerstone for rural development in the past are being replaced by the more nationalistic emphasis on family production as the traditional basis of the Mongolian livestock economy. Cooperatives will probably continue to exist, but their role will be different from what it was in the past, focusing more on marketing than on production.

Although we do not intend to discuss in detail why collectivization did not result in increased production, we suggest that the rigidities of the system did not provide enough incentives for production increases at either the aggregate or the individual level. They also prevented individual producers from responding rationally to economic factors. It is difficult to predict with exactness the economic results of an agricultural system based predominantly on small family production units, but some increase in production can be expected. If Mongolia has the same experience as China, rural production and rural incomes should both rise substantially. Gross agricultural output in China rose by one-third in the five years after the introduction of rural reforms, and rural per capita income doubled (Griffin 1984, 303-4).

Since the limited financial resources available in Mongolia will not support capital-intensive rural development, an increase in production will likely create new demands for labor in rural areas. If the rural labor market expands during the next two decades in line with the natural growth of the rural population, and if a rise in production results in higher incomes for rural families, then rural-to-urban migration may slow down considerably. Such a trend will be reinforced if the urban labor market experiences only modest growth.

A different outcome is also possible. If changes in landholding patterns and rural institutions result in greater efficiencies in agricultural production, then a rural surplus labor force may be produced. The growing number of rural unemployed may increase pressures on rural resources and stimulate rural-to-urban migration, flooding the cities with workers who cannot easily be absorbed into the urban economic system. The result may be elevated levels of unemployment in the cities, strains on urban infrastructure, and the creation of squatter areas beyond the *ger* encampments that already exist. Again, the situation in China suggests that a vast increase in rural-to-urban migration is likely if agricultural reforms introduce greater efficiency in production (Goldstein and Goldstein 1985).

Inevitably, this transition will result in both winners and losers. Some family units will succeed in increasing their herds and thus their incomes, while others not as successful will endure a lower standard of living, in some cases falling below the subsistence level. Families that cannot adjust to the new rural market economy will become potential out-migrants. Quite likely, they will move to cities in search of better opportunities. In other developing countries where growth in agriculture has been slow or stagnant, experience has shown that migrants are usually better off in cities than in the countryside, even if urban employment opportunities are also limited (Goldscheider 1984).

Another factor that will probably affect rural out-migration is the rapid natural growth of the working-age population in rural areas. As in urban places, fertility has declined in the countryside, but because of past high fertility the population now at working age is increasing at a very rapid rate. Even with labor-intensive rural development, it is unlikely that the rate of job creation will match the growth of the working-age population.

If rapid population growth continues in the rural areas and at the same time income and wealth become more concentrated, then rural unemployment will rise. As a result rural-to-urban migration may be higher than is currently

assumed, even though not as high as it was during the 1960s and 1970s. It will probably be substantial enough to create sizable pockets in urban areas that are economically and socially marginal, with slums and squatter settlements of extremely low-income populations on the outskirts of the cities (see Kasarda and Parnell 1993; Stren, White, and Whitney 1992). It is therefore possible to envisage that cities will continue to exhibit high rates of growth. This will not be as a result of labor demands generated by a rapidly growing industrial sector but mainly as a result of high rates of population growth in the rural areas combined with increasingly unequal income distribution.

Circulation, or temporary migration, from rural to urban areas is also quite likely to increase. The core of Mongolia's food-distribution system is still state owned. Although the transfer of 340 state companies was just beginning in the early 1990s (*Newsweek*, 9 May 1992), by 1992 about nine out of every 10 small stores in Ulaanbaatar were already in private hands. Over the same period, the number of street markets mushroomed. The urban informal sector is linked to individual producers in rural areas, and not to cooperatives or state farms. As in China (Goldstein and Goldstein 1990), many of the merchants in urban street markets are individual producers or members of cooperatives who travel to cities to sell their products. This mechanism for food distribution is becoming increasingly important, reflecting the inefficiencies of the official system and the lack of a formal private system. The large-scale disassembling of the state-owned system and the emergence of a private formal system may take a long time. Meanwhile, the circulation of rural producers to cities to sell their products may result in substantial rural-urban interaction. In time, this pattern may be extended to other sectors, such as construction and service work.

Within the context of a free market economy, it will be difficult for the government to resuscitate past restrictions on movement to avoid the undesirable growth of cities. However, an adequate, extensive, and fair economic policy for

the agricultural sector, and in particular for family production units, will probably indirectly reduce rural out-migration through a general improvement in rural welfare. Diversification of agricultural activities may also help expand the capacity of the rural economy to retain its population. It is clear that future urbanization levels and trends will greatly depend on the government's policies toward the rural economy.

With an economic crisis gripping Mongolia in the early 1990s and the shock of transforming the economic system from socialism to capitalism, the government has been largely engaged in coping with emergency conditions. Specific policies regarding industry, trade, health, education, and housing have not been formulated. Some official documents outline general principles to guide these sectors, but they do not spell out policies or interventions with any precision. If implemented, these general principles will have indirect effects on population movements. For the present, however, it is risky to anticipate the adoption of specific policies that may affect urbanization.

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