CONTEMPORARY SOVIET MODERNIZATION AND ITS ETHNIC IMPLICATIONS: 1959-1979

By Nicholas Dima

Almost since its inception, the Soviet Union has pursued a steady process of socialist "modernization," implying among other things planned industrialization, urbanization, and high levels of education. One of the most significant features of this process is a massive shift of population from rural to urban areas. This process, however, has affected various geographic regions and units of the USSR very differently. Also, the population implications of this process of "modernization" have varied greatly from region to region and from one ethnic group to another.

In general, it has been the Russian-speaking regions and the Russian people as a nationality that have experienced the most rapid changes, entailing rural depopulation, while the non-Russian regions and nationalities, mostly in the southern part of the Soviet Union, have experienced slower modernization accompanied by an increase in their rural population.

This essay discusses the implications of the Soviet social modernization by analyzing the 1959-1979 intercensal period and focusing on those major nationalities recognized by union republics. At the same time, we shall briefly discuss the main causes of differential modernization with emphasis upon rural-to-urban migration. It also sheds some light on the discrepancies existing between the Russian/Slavic peoples and the southern, mostly non-European nationalities from Central Asia. Demographic statistics relating to the major nationalities and their evolution over the last 20 years are shown in the two tables included in the text.

The difficulty of interpreting Soviet population data, and particularly ethnic data, should be stressed from the beginning. Since the first modern Russian census was taken in 1897, the Soviet demographic data have continuously decreased in volume and quality. The 1897 census, for example, contains 89 volumes. The first Soviet census taken in 1926, probably by people of the old school of statistics, was published in 66 thick volumes. It contains detailed data, and is similar to the

1897 census, having parallel headings in French. The next census, taken in 1939, was never published. Probably, it would have demonstrated the disastrous results of Stalin's cruel policies. The 1959 census was printed in 16 volumes, one for each union republic plus a summary volume. The 1970 census was allotted only 7 volumes, and the 1979 census has not been published yet. Knowledgeable people say that it may be condensed into only 2 volumes, or perhaps not be published at all. The census undoubtedly reveals a downtrend in the number of Russian and Slavic people in the USSR.

Aside from the scarcity of data, particularly in the field of fertility, mortality and natural increase, and even more so in respect of nationality, the data are erratic, incomplete and inconsistent, and consequently cross-references are difficult to make.

There is also an additional problem for those seeking data on the Soviet nationalities. Persons of mixed parentage can declare their nationality to be Russian if one parent is Russian. It also seems that linguistically assimilated individuals can declare themselves to be Russians, particularly if they reside outside their own republic. Therefore, it is believed that millions of non-Russians declare themselves to be Russians for convenience and personal interest, although they are not ethnic Russians. Since better sources are not available, researchers must nevertheless do their best to untangle the facts from the available Soviet population data.

Between 1959 and 1979, the Soviet population increased by 25 percent, growing from 209 million to 262 million. However, while the rural population declined by 10 million, from 109 to 99 million, the urban population increased by 64% from 100 million to 164 million. (1) The urban increase resulted primarily from rural-to-urban migration; from the natural increase of the urban population itself; and from the reclassification of certain rural areas as urban settlements. (2) Although the ratio between the rural and urban population changed in a reasonable way on a Soviet-wide basis, it changed greatly from one region to another. According to Soviet data, between 1959 and 1970, 3 million people left the rural areas every year to settle in cities, though half of them failed to integrate into urban life and returned to their villages. Nevertheless, the proportion of the Soviet rural population decreased from 52

percent in 1959 to 44 percent in 1970, and then to 38 percent at the time of the last census in 1979.(3) These overall figures, however, hide the huge disproportion which developed between regions, republics and nationalities. They also hide the great differences in the rate of regional modernization in the USSR, and their socioeconomic and demographic consequences.

By and large, the European USSR and Western Siberia have urbanized rapidly, losing rural population correspondingly, while the non-European USSR and the southernmost European regions have urbanized at a much slower pace, and their rural population has increased. Thus, between 1959 and 1970, the rural population increased by 37 percent in Soviet Central Asia, while it decreased by 17 percent in the Central Economic Region of the RSFSR (the Russian Federation). Within these two extremes of change, the other Soviet regions and republics have experienced a multitude of rural population changes. from great increases to real depopulation. Roughly, the central and western parts of the Soviet Union lost close to 8 million rural inhabitants, mostly rural Russians, while the southern areas increased their rural population by about 8 million, almost exclusively non-Russian peasants. For example, the Central Economic Region alone lost 2 million rural inhabitants, the majority of them young educated individuals. In contrast, Central Asia increased its rural population by 4 million people within the same period of time, all of them young, non-Russian, Moslem inhabitants. (4)

Applying a "push-pull" model of migration refined with "personal factors" and "intervening obstacles" to an array of over 30 socioeconomic and demographic variables, analyzing them according to a set of 26 economic regions and union republics, and subjecting them to rank correlations and factor analyses, we arrive at the following conclusions as to the principal causes of differential migration and especially village to city migration: (5)

1) The most important cause leading Soviet people to depart from the land appears to be regional modernization, defined partially as urbanization and industrialization. These factors reinforce each other, offering a large variety of employment opportunities, and act as "pull" factors attracting people from the countryside — in the absence of political barriers to migration.

- 2) Next in importance is a personal factor, education, which is an obstacle to modernization when deficient.
- 3) Ethnic factors are also very important, these being generally linked to education. By and large, if a non-Russian is educated and speaks Russian, he faces no barrier to emigration from rural areas. However, if a non-Russian does not speak Russian and has little education, his migration chances are restricted because most Soviet cities are Russified.
- 4) Agricultural conditions, per se, treated as "push" factors, do not seem to be important in emigration from the land, probably because in the Soviet Union agricultural technology is not sufficiently advanced to force rural emigration.

IMPLICATIONS

After almost 60 years of continuous effort, the Soviet Union is becoming a mature industrial society with all the attendant intricate traits, such as ethnic and cultural complexity, higher educational levels, social stratification, urbanization, complexity of community organization, social mobility, and rural depopulation. Consequently, in the perspective of industrial development, these elements should result in certain already established patterns of effects, "regardless of the political system governing the USSR." (6)

The most important consequences of modernization, of which rural-to-urban migration and rural population changes are integral parts, are of a socioeconomic and demographic nature, and in multinational countries, such as the USSR, of an ethnic and even racial nature. This urbanization occurs primarily at the expense of the rural population. Demographically, however, "the fact that migrants are not a representative cross-section of the population they leave or the population to which they move," has obvious implications. (7) In the Soviet Union, it has a discernable impact upon the age and sex structure of the population; upon its fertility and natural increase, and upon the labor force. More importantly, since "internal migration within multinational states is a potentially disjunctive force," (8) in the USSR it also has great ethnic implications.

Age and Sex Implications

Out-migration from the rural areas of the Soviet Union is obviously dominated by people in the working force age-group,

especially young males in their twenties. On a Soviet-wide basis, for example, the 20 to 29 year old rural age-group decreased from 17 percent in 1959 to only 9 percent in 1970. The decline in the proportion of young people within the whole rural population has been, however, extremely uneven throughout the USSR. Whereas in most Russian European regions the population in this age-group decreased in absolute numbers by as many as 30 to 45 percent, in Central Asia it decreased by only 12 percent and in Kazakhstan only by 9 percent. (9) The uneven decline in the proportions of the young rural Soviet population, actually the potential parents and the strongest component of the labor force, has further ethnodemographic consequences.

Fertility and Natural Increase Implications

"Urbanization created a new social milieu wherein high fertility and large family size conflicted with levels of living, aspirations for mobility, and life-style." (10) Following a high rate of urbanization, the Soviet crude birth rates went down steadily after the Second World War, and more evenly and visibly within the last 20 years. In 1970, for example, in most Russian and Ukrainian regions which had experienced both industrialization and continuous rural out-migration the crude birth rates had already fallen to 15 per thousand and under. In the southern republics, by contrast, and notably in Central Asia, where most local nationalities are still rural and do not emigrate from the land, the crude birth rates were more than twice as high, or between 32 and 37 per thousand. In 1980 crude birth rates were 18.3 for the USSR as a whole, 15.0 for the RSFSR and between 30 and 37 per thousand for Central Asia. (11)

Consequent to these differential birth rates, the natural increase of the Soviet regions and republics has been extremely uneven, as well. While the overall increase of the Soviet population was approximately 10 per thousand in 1970, the rate of increase varied from 6 to 7 per thousand in the RSFSR and the Ukraine (with a record low of 4 per thousand in Latvia) to a high of 25 to 30 per thousand in all Central Asian republics. (12) Such an increase, five times higher than in Russia proper, is equivalent to the "explosive" increase presently characteristic of the third world.

Labor Force Implications

The labor force of the Soviet population has also been greatly and unequally affected by the Soviet pattern of modernization and out-migration from agriculture. In this respect, the USSR can be divided into three large regions: 1) the European part, except for Moldavia (former Romanian Bessarabia) and North Caucasus, has experienced heavy out-migration, generally coupled with industrial development, and has already begun to feel some labor shortages; 2) Siberia and the Far East have experienced heavy out-migration from rural and urban areas as well, have undergone industrial development, and already have great labor shortages in both rural areas and cities; and 3) Central Asia, Kazakhstan, Transcaucasus, North Caucasus and Moldavia have experienced little rural out-migration, less industrial development, and consequently have large labor resources. In fact, these southern republics are regarded as the main Soviet labor reserves for the present and future as well. During the next decade the labor force will continue to increase in the south, particularly in the countryside, while European Russia, Siberia and the Far East will have great labor deficits. Under these circumstances, Soviet planners and demographers are already advocating that population "resettlement is a matter of great national importance" for the future of the USSR.(13) Nevertheless, such "resettlements" will have profound ethnic consequences, and may create difficult to reconcile political tensions.

Ethnic Implications

The more than 130 officially recognized Soviet nationalities are "characterized by different levels of cultural, social and economic achievements." (14) Obviously, the more urban a nationality is the more population redistribution from villages to cities it has undergone. At the same time, education and employment in industry and services, all of them associated with general modernization, grow with urbanization, while the Soviet rural environment generates economic stagnation and poverty. (15)

The Russians, the Slavs and generally the European nationalities have modernized more rapidly than the non-Russians, especially more than those nationalities located in the "rural" south. The Russians are the most urbanized major Soviet

TABLE I
MAJOR SOVIET NATIONALITIES: 1959-1979.
(Soviet Census definition)

	Total F	opulation	Percent of Total		Percent
Nationality	in r	nillions			Increase
	1959	1979	1959	1979	1959/79
Russians	114,114	137,397	54.7	52.4	20.4
Ukrainians	37,253	42,347	17.8	16.1	13.7
Uzbeks	6,015	12,456	2.9	4.8	107.1
Belorussians	7,913	9,463	3.8	3.6	19.6
Kazakhs	3,622	6,556	1.7	2.5	81.0
Azerbaydzhanis	2,940	5,477	1.4	2.1	86.3
Armenians	2,787	4,151	1.3	1.6	48.9
Georgians	2,692	3,571	1.3	1.4	32.7
Moldavians*	2,214	3,097	1.1	1.2	40.0
Lithuanians	2,326	2,851	1.1	1.1	22.6
Tadzhiks	1,397	2,898	0.7	1.1	107.4
Turkmens	1,002	2,028	0.5	8.0	102.4
Kirgiz	969	1,906	0.5	0.7	96.7
Latvians	1,400	1,439	0.7	0.5	2.8
Estonians	989	1,020	0.5	0.4	3.1
Tatars	4,968	6,317	2.4	2.4	27.2
Jews	2,268	1,811	1.1	0.7	

^{*} Moldavians/Romanians (Soviet definition)

Sources: Itogi Vsesoyuznoy Perepisi Naseleniya 1970 goda

(Moscow: Statistika, 1972), Vol. IV, pp. 9-15; Vestnik Statistiki, No. 7, 1980, pp.

41-42.

TABLE 2

MODERNIZATION OF SOVIET NATIONALITIES: 1970
(Urbanization, Education, Marital Status and

Proportion of Children)

Nationality	Urbanization (percent)	Education (per thousand)	Female Marriages*	Children 0-15 (percentage of total population)
Russians	68.0	256	91	28.1
Ukrainians	48.5	237	112	25.7
Uzbeks	24.9	199	217	51.5
Belorussians	43.7	209	76	23.3
Kazakhs	26.7	191	123	49.1
Azerbaydzhanis	39.7	226	183	50.1
Armenians	64.7	315	152	36.9
Georgians	44.0	405	134	30.9
Moldavians	20.4	108	119	33.9
Lithuanians	46.7	164	54	28.5
Tadzhiks	26.0	170	249	52.2
Turkmens	31.0	172	191	51.1
Kirgiz	14.6	190	201	51.8
Latvians	52.7	239	59	21.7
Estonians	55.1	242	49	21.2

^{*} Married women of 16 to 19 years of age per 1,000 women.

Sources: Itogi Vsesoyuznoy Perepisi Naseleniya 1959 goda (Moscow: Gosstatizdat, 1962), p. 190. Itogi Vsesoyuznoy Perepisi Naseleniya 1970 goda (Moscow: Statistika, 1972), Vol. IV.

nationality. (Table 2) In 1970, for example, 68 percent of all Russians are urban as compared to only 15 percent of all Uzbeks in this category. In addition, between 1959 and 1970, the Russians and the other Soviet Slavs urbanized about twice as fast as the southern non-Slavic nationalities. (16) This trend widened the gap between these peoples, rather than bridging it, and has continued.

Furthermore, the Russians and the other more urbanized nationalities also enjoy much higher levels of education than the little educated southern ethnic groups. In 1970, for example, as many as 256 Russians per thousand had at least a middle education, as compared with only 108 Moldavians, 170 Tadzhiks and 172 Turkmen per thousand falling into this category, respectively.(17)

With regard to modernization and population change, even Soviet writers, who tried for a long time to formulate population laws unique to communist societies, now recognize that the same process takes place in the USSR as takes place elsewhere. At the beginning of the Soviet era, Marxist thinkers advocated equal development of all nationalities and regions, foreseeing "the elimination of nationality, both as a material and as a psychological factor," once differences were eliminated and social classes dissolved. (18) Contrary to their expectations, the nationality question has become an important issue in the Soviet Union. In this respect, Suslov, then the party's leading ideologist, identified three antagonisms existing in the USSR: national antagonism, rural-urban antagonism, and white-blue collar antagonism. Teresa Harmstone comments that these antagonisms reflect "the growth of pluralism and class differentiation in an increasingly developing and modernizing Soviet society."(19)

A number of recent Soviet articles have stated that Soviet ethno-demographic processes are similar to those occurring in other countries. According to Pokshishevskiy, urbanization promotes assimilation on the one hand, but on the other hand it sharpens ethnic awareness. Referring to capitalist countries, the Soviet author states that such increases in ethnic consciousness could open the way to ethnic clashes. (20) As Szporluk comments, "The Soviet experience suggests that, despite the pressure for assimilation, urbanization and industrialization have produced unassimilated, though modernized non-Russian

cadres."(21) On the one hand, non-Russian rural nationalities are ethnically strong because they are able to better preserve their traditional values in the countryside; on the other hand, the Soviet cities are themselves becoming centers of national culture and consciousness. Pokshishevskiy even suggests that, "in the USSR it is now the city, perhaps more than the countryside, that has become the 'carrier of the ethnos'." (22)

The current Soviet ethno-demographic trend shows the ethnic Russians at a disadvantage vis-a-vis the other Soviet ethnic and racial groups, and this will certainly have important future implications. The Russians are clearly more modernized than other Soviet peoples, but the less modernized nationalities marry earlier, have large families (particularly in the countryside), and therefore increase more rapidly. Modern, urbanized, educated Soviet nationalities, such as the Russians, marry later, have small families and increase in number only slightly, if at all. Between 1959 and 1979, the Russians increased by only 1 percent annually, whereas Central Asians as a whole increased by some 5 percent annually, or almost five times as fast. Consequently, the Russian population is aging: only 28 percent of the Russians were under 15 years of age in 1970. By comparison, about 52 percent of the Central Asian nationalities were under 15 years of age in 1970. (Table 2)

According to the 1979 census, children 0 to 9 years of age made up 16.8 percent of the entire Soviet population. In the Russian Republic, however, the figure was only 14.8 percent while in Central Asia it was 29 to 30 percent. (23) "Since these children will in turn become members of the armed forces, workers and parents, they will thus determine much of the future character of Soviet society." (24) Increasing numbers will definitely bolster the assertiveness of the non-Russians in the Soviet Union.

The proportion of Russians in the total Soviet population is clearly decreasing, while the non-Russians are increasing correspondingly, especially in Central Asia. Projecting into the future the current fertility and natural increase, it is logically expected that by the end of the century the Russian proportion of the Soviet population will fall below 50 percent. Feshbach has forecasted that by the year 2000 the Soviet Union will have approximately 300 million people of whom only 140 million or 46.7 percent will be Russians. By com-

parison, the Soviet Moslem population, now 44 million or 16.7 percent, will increase to 64 million or 21.3 percent of the Soviet population. (25)

This trend has already become obvious within the Soviet labor force, particularly among its young members. Before the end of the century, the Russians will comprise only some 40 percent of the Soviet labor force and about 30 to 35 percent of its young members. At the same time, before the end of the century only one in four or even five new draftees in the Soviet military will be Russian, most of them being "brown" or "yellow" recruits from the rural Soviet south. The future "red" army will become a rather "yellow" army. Certain specialists have already begun to speak of this process as the "yellowing" of the Soviet military. (26) Such a perspective is not likely to satisfy the Russians, but there is little they can do about it. Demographic processes follow socioeconomic realities rather than ideological policies. In addition, the socioeconomic forces presently at work are not likely to change in the near future, thus the ethno-demographic gap between the Russians and the non-Russian nationalities will continue to widen, rather than to narrow.

It is also politically significant that the rapid demographic increase of the non-Russians, coupled with their increasing education, may tend to sharpen their ethnic awareness in the future rather than level it off. Since ethnic consciousness is ever-present in multinational states, and particularly so at times when there is an "opportune moment politically to overcome long-standing denial of privilege;" (27) and since ethnic consciousness also implies political consciousness, it is to be expected that at some point in the future the Russian domination of the Soviet Union will be strongly challenged by the non-Russian nationalities.

To some extent, the ethnic conflict has already started. A number of Soviet Moslem soldiers defected to the Moslem side in early 1980 when they were sent to fight in Afghanistan, leading the Soviet military leaders to replace most of the Central Asian troops in the Soviet forces in Afghanistan by soldiers of European, chiefly Russian and Slavic, stock. What will the next Soviet generation do? According to a recent Rand Corporation Study, the Soviet Army is already troubled with "racial and ethnic conflicts that could trigger large-scale

defections in case of protracted war or serious military reversal." (28) In such a situation, the study, based upon in-depth research and numerous interviews with Soviet ex-servicemen, envisages such combat-related scenarios as ethnic clashes, racial riots and even mutinies based on ethnic grievances.

We have been accustomed to speaking of the Soviet bloc as "the Russians," despite the shock experienced by the civilian population of East Europe who found that the advancing World War II Soviet troops were often Asians and not Russians. Marxist ideology is color-blind as to the concept of race, conceiving of an age in which all races and all cultures will be eventually amalgamated into a single world-wide, common proletariat. Officially the emphasis is still on the concept of the "Soviet" man and the "Soviet" woman, with active nationalists of all ethnic groups, even Russian, facing the threat and often the reality of lengthy imprisonment. But the ethno-demographic realities of the Soviet Union may well prove to be stronger than Marxist theory, shaping and crucially influencing the future of the Soviet Union in ways which Marx and Lenin would never have expected.

FOOTNOTES

- (1) Itogi Vsesoyuznoy Perepisi Naseleniya 1970 goda (Moscow; Statistika, 1972), Vol. 1; Naseleniya SSR (Moscow: Politizdat, 1980).
- (2) R.V. Tatevosyan, "Methods of Analysis of Interregional Migration in the USSR in Relation to the Process of Urbanization." Soviet Geography, XII (February 1972), p. 128.
- (3) Itogi Vsesoyuznoy Perepisi Naseleniya 1970 goda, Vol. 1, pp. 10-21: Naseleniya SSR (Moscow: Politizdat, 1980), p. 3.
 - (4) Ibid. pp. 10-21.
- (5) Nicholas Dima, Rural Population Change in the Soviet Union and its Implications: 1959-1970. PhD Dissertation (New York: Columbia University, 1976).
- (6) Alex Inkeles, Social Changes in Soviet Russia (Cambridge: Harvard University Press, 1968), p. 427.
- (7) Calvin Goldscheider, Population, Modernization and Social Structure (Boston: Little, Brown and Co., 1971), p. 299.
- (8) Robert A. Lewis, Richard H. Rowland and Ralph C. Clem, Nationality and Population Change in Russia and the USSR (New York: Praeger, 1970). p. 90.
 - (9) Itogi Vsesoyuznoy Perepisi Naseleniya 1970 goda, Vol. 11, pp. 12-75.
 - (10) Goldscheider, Population, Modernization and Social Structure, p. 150.
- (11) Narodnoye Khozyaystvo 1922-1972 (Moscow: Statistika, 1972), p. 42, and same 1980 (1981), pp. 32-33.
 - (12) Ibid.
- (13) A. Maikov, "Redistribution of Rural Labor Resources," *Problems of Economics*, XV (November 1972), p. 38.

348 JOURNAL OF SOCIAL, POLITICAL AND ECONOMIC STUDIES

- (14) I.S. Koropeckyj, "Industrial Location Policy in the USSR," in *Economic Performance and the Military Burden in the Soviet Union* (Washington, D.C.: U. S. Government Printing Office, 1970), p. 234.
 - (15) Ibid.
- (16) Itogi Vsesovuznoy Perepisi Naseleniya 1959 goda (Moscow: Gosstatizdat 1962), Vol. 1, p. 190, Itogi Vsesoyuznoy Perepisi Naseleniya 1970 goda, Vol. IV, pp. 27-28 and 393-404.
 - (17) Ibid.
- (18) Hans Momsen and Albrecht Martiny, "Marxism, Nationalities Question," in *Marxism, Communism and Western Societies: A Comparative Encyclopedia*, ed. by C.D. Kernig (New York: Herder and Herder, 1973), Vol VI, p. 34.
- (19) Teresa Rakovska Harmstone, "Recent Trends in Soviet Nationality Policy," in *Soviets in Asia*, ed. by Norton T. Dodge (Mechanicsville, Maryland: Cremona Foundation, 1972), p. 12.
- (20) V.V. Pokshishevskiy, "Urbanization and Ethnographic Processes," Soviet Geography, XIII (February, 1972), p. 20.
- (21) Roman Szporluk, "Nationalities and the Russian Problem in the USSR: An Historic Outline, "Journal of International Affairs, XXVII, No. 1 (1973), pp. 37-38; see also Nicholas Dima, "Moldavians or Romanians?," The Soviet West: Interplay between Nationality and Social Organization, Ralph C. Clem, ed. (New York: Praeger, 1975), pp. 30-45.
 - (22) V.V. Pokshishevskiy, "Urbanization and Ethnographic Processes,." p. 116.
- (23) Murray Feshbach, "The Soviet Union: Population Trends and Dilemmas," Population Bulletin, Vo. 37, No. 3, 1982, p. 14.
 - (24) Ibid. p. 15.
 - (25) Ibid. p. 22.
- (26) Murray Feshbach, "Prospects for Massive Out-Migration from Central Asia and Kazakhstan in the Next Decade," in Soviet Economy in a Time of Change (Washington, DC,: US Government Printing Office, 1979).
- (27) Immanuel Wallerstein, "The Two Modes of Ethnic Consciousness: Soviet Central Asia in Transition," in *The Nationality Question in Soviet Central Asia*, ed. by Edward Allworth (New York: Praeger, 1973), pp. 168-169.
 - (28) The Washington Post, 18 July 1982, p. A 5.
- (29) Robert A. Lewis, "The Mixing of Russians and Soviet Nationalities and its Demographic Impact," in *Soviet Nationality Problems*, ed. by Edward Allworth (New York: Columbia University Press, 1971), p. 117; Warren W. Eason, "Population Changes," in *Prospects for Soviet Society*, ed. by Allen Kassof (New York: Praeger, 1968). p. 240.

THE POPULATION CRISIS IN SUB-SAHARAN AFRICA

By Jacob Meerman and Susan Hill Cochrane

The view persists that sub-Saharan Africa is underpopulated; that its economic growth will be accelerated if its population increases. This view is based on two arguments. First, that modernization (read: industrialization) is facilitated by large numbers of people because they make possible greater specialization and the application of productive modern techniques. Yet three quarters of the countries in the region have populations of less than ten million people. The second argument is that population density is low relative to arable land, which would be more productive if there were more people to work it.

Neither argument is really persuasive. Large numbers do not automatically lead to rapid economic development — the slow growth in India and Bangladesh testifies to this. The key element for economic growth is production stimulated by the effective demand of large markets. For small countries, these have to be export markets. But rising populations in sub-Saharan Africa have led primarily to economic growth based largely upon traditional village agriculture, and this has not increased per capita output. Population growth of this genre could actually reduce total cash income per head because of diminishing returns as more labor is applied to a less productive agriculture.

It is true that the density of population in the region is very low — on average less than one fifth of that in Asia. But in Asia, more modern technology and better natural conditions — irrigation and double cropping — permit families to cultivate small plots very intensively. In Africa many times more land per capita is needed for survival. Against this measure, much of the region is already crowded: unless new technologies and practices evolve, agricultural output can no longer increase in proportion to additional agricultural labor.

This article presents an opposite argument: sub-Saharan Africa — given its present institutions and endowments of capital and technology — is already dangerously close to overpopulation. The rapid growth in numbers projected for the next