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# Looking Ahead

It is a rare moment in the world of demographic research when four things coincide: a profound global trend presents itself; the conceptual tools needed to analyze it and rich empirical resources are available; the trend has drawn the attention of closely allied fields and occasioned an outpouring of work by scholars in these fields; and yet the path forward lacks the signposts that would normally have been established by previous research. This is the situation facing demographers as they contemplate the cities of poor countries. The prospects are inviting, but for demographers, at least, this is an urban frontier.

The important urban trends reviewed in this lengthy report have been summarized twice: once in the executive summary at the beginning of the volume, and again, in more detail, at the end of each of the substantive chapters. Here, we touch only on the highlights of this complex picture, in order to draw out the implications for research policy. At the center of the story is the fact that nearly half the world's population and over three-quarters of the population of high-income countries currently live in cities. Today's world hardly resembles that of the early twentieth century, when only about 14 percent of the world's population was urban, and it is significantly changed even from 1950, when the figure was 30 percent (Grauman, 1976; United Nations, 2002a). By 2030, it is likely that more than 80 percent of the population of North America, Europe, Australia, and Latin America and more than 50 percent of the populations of Asia and Africa will be living in urban areas.

Although demographers have given attention to migration, they have otherwise left unexamined the implications of city life for demographic behavior in poor countries. It is here that the intellectual tools being honed in research on the United States and other rich countries can be applied—the concepts of multilevel analysis, social networks, neighborhood effects, social capital, and diffusion; and the array of measures used to understand the spatial expressions of segregation. When these tools are finally brought to bear on the cities of poor countries, we

expect they will unearth many similarities in behavior in rich and poor countries, but also many differences, each having the potential to enrich understanding of urban life.

It is not only that more people in the developing world will be living in cities—both large and small—but also that cities are themselves being transformed, that will force a reconsideration of policy and research. Many of these cities participate in global networks of exchange and circuits of information; international markets, always important to some cities, are taking on greater importance for a wider variety of them; and in many countries, the relations of national and local governments are being reconfigured by decentralization and the transfer of fiscal authority and the responsibility for services from national to local units of government. Increasingly, solutions to urban challenges are to be found at the subnational, regional, and local levels.

The management of diversity and inequality is among the fundamental tasks of urban governance. As urbanization brings a greater percentage of the national population into city life, the diversity of experience within cities will become more important to debates on poverty and inequality. All cities contain elite neighborhoods that are well served by good schools, health facilities, and public utilities. All cities contain poor neighborhoods as well, and in many of these the disadvantages of poverty are vividly expressed in demographic indicators. Poor neighborhoods typically suffer from grossly inadequate public infrastructure and services, lower school enrollment rates, less control over fertility, higher risks during pregnancy, lower levels of nutrition, and higher rates of mortality. Spatial segregation and the spatial concentration of poverty are likely to be just as important in the cities of poor countries as in those of the United States.

At present, few local and national statistical systems are engaged in systematic collection of the spatially disaggregated data needed to investigate such issues. National-level surveys, although indispensable for many purposes, generally cannot provide reliable portraits of individual cities and neighborhoods. The great international programs of survey research of the past quarter-century—the World Fertility Surveys and the Demographic and Health Surveys—have been all but aspatial in their design. Like most demographic surveys, they allow for little more than the use of crude urban/rural dichotomies. If there were ever value in such simplistic measures, it is being eroded by the blurring of boundaries between cities and their surrounding regions and by the differentiation that increasingly marks rural communities in their connections to urban economies (Coombes and Raybould, 2001; Hugo, Champion, and Lattes, 2001).

For many reasons, then, there is a pressing need to develop the local datasets that can illuminate local realities and inform local policy, planning, and investment decisions. Comparative research on urban neighborhoods is valuable not only as research, but also as a means by which local and national authorities can understand their own situations by reference to similar situations elsewhere. As local governments develop their research and planning capabilities, there will

be many opportunities for international technical assistance and funding, through both south-to-south and north-to-south transfers. The purpose of this final chapter is to identify several promising directions for future urban demographic research and to suggest ways of improving the basic infrastructure that supports such research.

## **DIRECTIONS FOR FUTURE RESEARCH**

### **New Conceptualizations of Location**

In company with many urban scholars, we have emphasized the need for careful conceptualization and measurement of human settlement. New concepts and measures must recognize the ambiguities of urban boundaries and the many interconnections among rural and urban populations. This is not a new recommendation: in 1952 the United Nations *Demographic Yearbook* urged that settlement systems be considered in terms of a continuum from small clusters to large agglomerations. Many criteria could be used to identify urban areas and their rural linkages. Hugo, Champion, and Lattes (2001) suggest a focus on three key dimensions: settlement size, population density, and accessibility, with the last of these measured in terms of distance to transportation and communication options. Urban researchers have also urged that attention be given to systems for classifying regions, so as to clarify the wider roles played by cities. The panel strongly endorses such research efforts.

### **More Spatially Disaggregated Data**

With the spread of democratization and government decentralization now under way in much of the world, local administrations are increasingly being required to operate with the speed and efficiency of private business while facing ever more complex political and regulatory environments. Local governments must digest an immense amount of information to perform their duties in a fair and efficient manner. Effective planning, forecasting, and policy making all require spatially disaggregated data—but at present these data are lacking in many developing countries. Planners often have only the most rudimentary knowledge of the numbers and characteristics of recent migrants and the populations living in the city peripheries. Governments could benefit greatly from small-area unit data on population size, growth, and composition; differential fertility and mortality rates would be valuable; and so would small-area socioeconomic profiles. When such data are lacking, it should come as no surprise that cities' own projections of their population growth often fall wide of the mark. Some of the necessary intraurban data will be gathered by internationally sponsored surveys, but in the main, such data will need to be collected by national statistical services, perhaps with inter-

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With the spread of democratization and government decentralization now under way in much of the world, local administrations are increasingly being required to operate with the speed and efficiency of private business while facing ever more complex political and regulatory environments. Local governments must digest an immense amount of information to perform their duties in a fair and efficient manner. Effective planning, forecasting, and policy making all require spatially disaggregated data—but at present these data are lacking in many developing countries. Planners often have only the most rudimentary knowledge of the numbers and characteristics of recent migrants and the populations living in the city peripheries. Governments could benefit greatly from small-area unit data on population size, growth, and composition; differential fertility and mortality rates would be valuable; and so would small-area socioeconomic profiles. When such data are lacking, it should come as no surprise that cities' own projections of their population growth often fall wide of the mark. Some of the necessary intraurban data will be gathered by internationally sponsored surveys, but in the main, such data will need to be collected by national statistical services, perhaps with inter-

national technical assistance. We urge that such technical assistance be given high priority.

Spatially disaggregated data could bring to light the diversity of health risks to which urban populations are exposed (Chapters 6 and 7), illustrate the distribution of poverty (Chapter 5), and give local governments a means of understanding where service gaps and redundancies lie (Chapter 9). Data on social, economic, and spatial differentiation at the neighborhood level can provide powerful political stimuli. For instance, maps of Accra and São Paulo showing cross-district differentials in health and environmental conditions produced considerable local debate and some policy changes in both of these cities (Stephens, Akerman, Avle, Maia, Campanareio, Doe, and Tetteh, 1997). Such maps can inform neighborhood residents and the politicians who represent them, providing an empirical basis for claims upon national and local resources (as occurred in London, where Charles Booth mapped social and economic differentials in the late nineteenth century).

Considerable capacity-building will be required before such visions can become realities. In most of today's large cities, municipal agencies maintain their own databases, with computerization and common identifiers permitting data sharing being far more the exception than the rule. There are very few examples of integrated databases for the constituent parts of large metropolitan regions. This is an area in which international technical assistance could greatly strengthen local capacities for local analysis.

In each country, a starting point would be to assess what data are available in national censuses. Census data should be among the most valuable sources of information on social and economic differentiation. When complete coverage is achieved, a census allows socioeconomic conditions of city neighborhoods to be described in minute detail. Data at the neighborhood level can be aggregated to depict larger parts of metropolitan region. Yet census data are not commonly available in such spatially disaggregated small areal units. The lack of recent census data is due in part to the fact that many low-income nations have held no census in the last 15 years. Even where new censuses have been conducted, many countries have lacked the capacity or the willingness to generate the disaggregated figures needed by local governments.

In the view of this panel, additional support may be needed for those international assistance and training programs, such as that of the International Programs Center of the U.S. Bureau of the Census, which support census-taking and the analysis of census data in developing countries by national statistical offices.<sup>1</sup> The analysis component of such programs warrants special attention. In the course of training, a focus on developing socioeconomic profiles of small areal units within cities could highlight the importance of spatially disaggregated data.

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### **The Potential of New Technology**

Remote sensing technologies are a promising addition to the set of tools used to gauge the spatial extent of cities and monitor change. Data gathered in this manner make a useful supplement to socioeconomic data collected by conventional means, especially when the latter are coded in a geographic information system (GIS). Recent research on the combination of remotely sensed and census data suggests that it may prove valuable in improving estimates of the spatial extent of cities and even their total populations. GIS technology is becoming a powerful tool in long-term strategic planning and management, and it has the potential to assist local governments in performing their diverse functions. The numbers and types of GIS applications are likely to expand rapidly, if a way can be found to surmount the challenges such technology presents to poor countries, and to keep the costs of training and database management affordable.

### **New Research Themes**

Throughout this report we have drawn attention to the distinctive features of urban environments that invite further demographic research. We strongly urge that where possible, such research have a comparative focus. Several dimensions of comparison warrant consideration: the situations of large and small cities; the conditions of the urban poor relative to the nonpoor and rural residents; and among the urban poor, the circumstances of those who are spatially concentrated in slums and those who live in more heterogeneous communities. If progress is to be made in understanding the demographic implications of spatial segregation, urban social networks, social capital, and the like, longitudinal research designs will eventually be needed. Even with richer data, many challenges will confront demographic research and the evaluation of program interventions. Just as in the United States, researchers assessing the impacts of poverty interventions in developing-country cities will need to grapple with the selectivities that arise from migration and program placement (Rosenzweig and Wolpin, 1982, 1988). They will need to make creative use of natural experiments and quasi-experiments. Cross-country comparative research also promises great dividends. As we noted in Chapters 6 and 7, the links between urbanization and demographic transitions need to be more carefully considered than they could be in this report. There is much still to be gained, we believe, by further examination of the World Fertility Surveys and the Demographic and Health Surveys.

### **IMPROVING THE RESEARCH INFRASTRUCTURE**

If urban demographic research is to make a contribution, attention must be paid to the infrastructure that supports such research, as represented by the major international datasets. At present, these data are often inaccessible or coded in such

a way as to prevent vital cross-linkages. The data assembled by the United Nations Population Division and summarized in *World Urbanization Prospects*, for example, form the basis for much international research on urban and city growth. Unfortunately, these data have not yet been put in the public domain. If they were made publicly accessible, the wider research community could then lend assistance in several ways: by uncovering errors in the data series, by helping to resolve inconsistencies, and by developing and testing new methods for estimating and projecting urban and city populations. Below we offer a list of recommendations that, if acted upon, would greatly enhance the value of existing data sources and on-going data-gathering programs.

**Allow Comparisons of Alternative Urban Definitions.** Many of the controversies in the measurement and definition of urban areas have to do with smaller urban areas—those under 100,000 in population—that are defined to be urban according to country-specific criteria. It is probably futile to ask that uniform criteria be applied in these definitions. Rather, we suggest that whatever a country's urban criteria may be, all areas so designated should be listed with their population sizes and other data relevant to the classification. This information should be made available to the United Nations for inclusion in its urban databases. Where possible, we would urge that some order be brought to the definitions of urban thresholds, density measures, and measures of megacities.

**Computerize the United Nations' *Demographic Yearbook*** We encourage the United Nations to release the city population data contained in its *Demographic Yearbook* as a computerized database with identifying codes that would permit the linkage of each city's data across years. Rather than using typographical conventions to indicate urban concepts and isolate cases of doubtful reliability, as is the current practice, such information should be included in standardized fields in the database, with other fields reserved for comments on country- or city-specific issues. Doing so would facilitate the use of these data for research and allow researchers to make their own decisions about the quality of individual data points. The quality and usefulness of the data in the yearbook could also be improved by close and regular collaboration between United Nations staff and independent researchers.

**Expand *World Urbanization Prospects*** We make three recommendations to the United Nations Population Division to strengthen the basis for urban population research.

**Include smaller cities** In recent years, the United Nations has not included population estimates or projections for cities of under 750,000 population, with the exception of capital cities. Given the importance of

such smaller cities to the urban transition, there is every reason to publish population estimates for all cities with populations of 100,000 and above. Whether projections for smaller cities should also be published is a separate matter calling for the exercise of research judgment.

**Make projection inputs public** The task of projecting city sizes is much too large to be relegated to a single division of the United Nations with its limited resources and many commitments. The broader research community could assist in evaluating and refining projection methods if the data used by the United Nations Population Division were made publicly available. Presumably, such data could be included in the *Demographic Yearbook* database mentioned above, so that all available population series for cities could be obtained from a single unified source.

**Specify the urban concept** The urban concept used in estimating and projecting city sizes varies considerably across countries, can vary across cities in a given country, and sometimes varies over time even for a single city. It is imperative to specify in the database, by city and by time period, the units used in the reports on city size; to note variations in reporting; and to describe how the projection methods take account of such variability in units.

**Refine Urban Indicators in the Demographic and Health Surveys** We recommend that a thorough review of the Demographic and Health Surveys (DHS) be undertaken from the perspective of urban demographic research. The panel has identified a number of areas in which the DHS methods could be improved at low cost. The single most important improvement would be to establish a permissions system that gives researchers access to spatial identifiers for the survey clusters. The system should be designed so as to protect the privacy and confidentiality of survey respondents (see Appendix F and the discussion in Chapter 4).

In addition, we encourage the DHS program to carefully review the effectiveness of its standard socioeconomic indicators in measuring advantage and disadvantage in urban populations. In water supply, sanitation, and provision of electricity, a set of questions could be designed to better measure the aspects of service adequacy and reliability. We make further specific recommendations with regard to public service delivery, migration, and reproductive health in Appendix F.

In making these recommendations for the DHS, we are mindful of the many conflicting demands that its survey program must balance. Other things being equal, we might also argue for increases in urban sample sizes and further improvements that could yield more precise and informative measures

of urban health and demographic behavior. But there are, no doubt, considerable opportunity costs involved in refashioning the DHS sample designs in such a way, and we remain unsure of the net benefits. Hence, we have not included such recommendations here.

In the very near future, the balance of population in many developing countries will shift from predominantly rural to predominantly urban. For the long run, we believe this to be good news. The challenge over the next 30 years, however, will be to take full advantage of the potential benefits of urbanization. Richer data will be required to illuminate the situations of the urban poor, and new concepts and methods will be needed to understand the changing demography of place—not only between rural and urban areas, but also across the urban spectrum and within large urban agglomerations. Little attention has been paid to these issues to date. It is the panel's hope that the findings of our report will stimulate research into these pressing issues in urban demography.