The Demography of Development

Francis Gendreau

INTRODUCTION

This article on recent research on the demography of development, and the contribution of Francophone demographers to that research, cannot be started without evoking the memory of two French pioneers in the field, both of whom died recently just a few months apart; they are Jean Bourgeois-Pichat (1912–90) and Alfred Sauvy (1898–1990).

Both of them were men of great culture and particularly stimulating minds who devoted a significant proportion of their many works to the study of Third World populations. It is hardly necessary to remind readers of this article that Sauvy himself coined the expression 'Third World' in 1952 and that he was the academic editor, with Georges Balandier, of the famous pioneering work, 'Le Tiers Monde, sous développement et développement' [*Balandier and Sauvy, 1961*].

It was not until the inter-war period that demography gradually became an autonomous discipline, centred in particular around the methods of demographic analysis and the theory of stable populations developed by Alfred Lotka. Jean Bourgeois-Pichat has written a manual on this theory, which he extends by introducing the notions of 'quasi-stable' and 'semi-stable' populations [*Bourgeois-Pichat, 1965*].

After the Second World War, the United Nations gave prominence to the new questions raised by Third World populations, and in particular their rapid demographic growth. Since then, research studies have proliferated, in both the French and English-speaking worlds, often based on the different approaches that will be outlined below.

It is our intention to take stock of the current situation and to outline the prospects for the demography of development. We will trace the evolution of research in the area which, having emphasised the problems associated with observation and then with descriptive analysis, embarked on a phase of explanatory analysis and then found itself given every encouragement to

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study population issues in their political dimension and in close association with development policies.

FROM INDIVIDUALS TO NUMBERS

The direction in which demographic research on the Third World developed initially was towards the accumulation of basic quantitative data. It should be noted that in most developing countries at the beginning of the 1950s, our knowledge in this area was very uncertain and fragmentary: fundamental data, such as total population or its rate of growth, were often non-existent or, at best, very approximate, even if this general statement should be qualified by some notable exceptions (India, for example).

It was necessary, therefore, to organise the gathering of information, a process which came up against multiple difficulties in the field: poor communications, illiteracy, weak administration ... [*Groupe de Démographie Africaine, 1973, Vol.1*].

The classic methods adopted in industrialised countries had to be radically altered and new methods developed: sample surveys, retrospective questions, sustained observation, repeated surveys, itinerant registry offices ... The contribution of French demographers and statisticians was decisive in this sphere.

Important advances were made [*CEPED, 1988*], due in particular to in-depth research on small groups, and to operations carried out at national level, often coordinated within an international framework: surveys conducted during the period 1954–66 in Francophone countries of black Africa, an African census programme (1972–84), a world fertility survey (1973–82), demographic and health surveys (ongoing since 1985). These programmes should not be wound down now, and the following three lines of development should be emphasised:

- a programme designed to encourage the gradual improvement of the quality of the data gathered during national operations, particularly censuses: cartographic work, the establishment of archives, the communication of experience, the conducting of post-census surveys ... In some cases, this programme will be intended simply to avoid the degradation of the quality of data from one operation to the next;
- a particular drive to promote civil registration, which is hardly improving and in some cases even deteriorating: gradual promotion strategies should be implemented, which is happening in some cases;
- the carrying out of methodological research in new areas such as the use of computers in the field or the use of satellite images.

The contribution of neighbouring disciplines (geography, sociology,

anthropology, economics, epidemiology) is fundamental to this drive towards improving the methodology of observation. This contribution is located on at least two levels.

- First, no data gathering operation can legitimately be carried out without close knowledge of the area and of the people being surveyed. The rules for allocating names to newly-born children may provide means of correcting the list of children born to a woman (twins may have particular names, as may the child born after the death of the preceding child; a particular surname may have a precise meaning ...). The demographic observation of nomadic populations, a real headache for demographers, cannot be seriously considered without good knowledge of their social organisation and of their itineraries. The organisation of successive generations into traditional age groups may explain declarations of age in the case of populations without civil registration ... .
- Second, the accepted definition of concepts must make them easily used in the field and provide a basis for the accurate description of social reality. This applies, for example, to certain socio-economic issues, such as the definition of residential units and households and of economic activity, the distinction between production, consumption and accumulation groups, the inclusion of the informal sector and the accurate description of women's work, which is too often underestimated. Simple questions, such as ethnic group or marital status, often mask complex situations that can only be properly clarified by anthropologists. The observation of migratory movements is an area in which collaboration with geographers is particularly fruitful. As for causes of death reporting, it cannot be understood without input from medical experts and linguists (the main diseases are generally very familiar to the populations affected).

TO ADJUST OR NOT TO ADJUST?

Consideration of the problems of demographic observation in the Third World tends to be an activity carried out by Francophone demographers. Generally speaking, indeed, demography in Francophone countries usually developed on a foundation provided by statistical organisations, and in close collaboration with them, and Francophone demographers consider that data collection is an integral part of their discipline. This is not the case in the Anglo-Saxon tradition, where there is a clearer distinction between statisticians and demographers, even if demographers in English-speaking countries are sometimes obliged to get involved in data collection (cf. the debates surrounding the last census in the USA).

This difference is reflected in the approaches adopted, and indeed it was

observed that difficulties in observation led to often significant errors in the indicators produced. Two alternative responses were then possible:

- efforts could be concentrated on improving data collection, the option usually selected by Francophone demographers;
- or the view could be taken that it was pointless, in the short term, to hope to obtain good quality data and that what had to be done was to develop methods for 'correcting' those data: this was the option that tended to be favoured by English-speaking demographers such as W. Brass, A. Coale, K. Hill, S. Preston and J. Trussell. It should be noted that the first of these methods were developed on the basis of observations made in surveys conducted in Francophone Africa, which shows that these two approaches are complementary.

Thus it was that a new branch of the demography of development, the adjustment of imperfect data, developed, particularly from the 1960s onwards. Many methods have been developed, which have sometimes given rise to interesting 'rebound effects' on data collection methods, such as the introduction of questions on the survival of parents which are of value in studies of adult mortality.

There is a multiplicity of such methods [*United Nations, 1984a; Clairin, 1985*]. They may consist of simple empirical adjustments, through the use of 'smoothing' techniques (for graphs or statistics), for example, or they may use external data, such as 'standard mortality tables'; finally, they may be based on 'models', particularly the stable populations model (and its extensions). This is an interesting case in which a discipline has been unified by the fortunate conjunction of two apparently unrelated approaches: the development of theoretical models on the one hand, and the improvement of data gathered in the field on the other.

This approach is worthwhile, but it must be accompanied by attempts to improve methods of observation. Its implementation must take account of the need for rationalisation; thus methods must be tested on populations with different characteristics, their sensitivity to the hypotheses adopted must be specified, and they must be made more accessible to users (translation of publications into French, development of programmes for PCs, etc.).

FROM DESCRIPTION TO EXPLANATION

The two approaches outlined above, observation and adjustment, gradually made increasingly detailed analyses of data possible.

The first objective was to describe levels, trends and differences between populations or subpopulations. Real progress has been made in this respect, even if grey areas still remain:

- numbers, sex and age structures, geographical distributions are gradually being revealed;
- the levels of the various demographic phenomena have now been virtually defined, at least for marriage rates, fertility and child mortality; although the same cannot be said of adult mortality and mobility;
- by contrast, trends are more 'difficult to discern' [*Locoh, 1989*], because of the flimsiness of the available sources.

Although a necessary stage, this quantitative, descriptive approach is nevertheless insufficient. As Joël Gregory pointed out, it is unfortunate that 'counting people has, for some, become an end in itself, rather than a working tool'. As Gregory puts it: 'the epistemological approach (what is the problem being set? what data should be gathered and analysed?) is sometimes inverted and truncated. The starting point is either the collection or the criticism of data ... there is no questioning of the reason for the numerical study of the various aspects of population' [*Gregory, 1979: 198*]. This excessively technical approach is more often found among Francophone demographers, although it is also found sometimes among their Anglo-Saxon counterparts (at Princeton, and the East–West Center in Honolulu). It is now being gradually eclipsed, since analysis has entered an explanatory phase, in which demographers are turning their attention to causal analysis, the development of explanatory frameworks and the study of the determinants of the phenomena observed.

This new research direction, now fully developing, is an important issue for the discipline:

> Demography, which has created for itself the reputation of being a 'hard' science by cutting itself off from related disciplines, particularly sociology and economics, might very well begin to suffer from its isolation at a time when descriptive analysis is gradually being supplanted by explanatory analysis [*Loriaux, 1985: 104*].

Some demographers, even some schools of thought or certain institutions, are reluctant to go down this path because they fear they will lose, if not their souls, then at least their specificity and particular know-how based on traditional demographic analysis. Others, fortunately, are resolutely starting to see demographic phenomena as social phenomena and to locate them in their economic, social and cultural context. Such research must be encouraged by emphasising a necessarily multi-disciplinary rather than a purely demographic approach. Indeed, the issues are located at the point where several social sciences (geography, sociology, economics) and the biological and medical sciences converge.

For instance, the persistence of high levels of fertility in Africa should be viewed in the context of a specific nuptiality system (virtually all people marry at some point, most people marry young and most re-marry if their first marriage breaks down), of high mortality of children and their early entry into the workforce, and of the insurance provided by grown-up children for their ageing parents.

As far as morbidity and mortality are concerned,

> non-medical factors affecting health are now becoming increasingly important in research on health in the widest sense: environmental problems, diet and lifestyle are recognised as important risk factors ... Thus the socio-cultural factors that determine behaviour, lifestyles and also access to modern methods of treatment are among the most important factors in health [*Cantrelle and Locoh, 1990*].

The value of this research often lies in the historical dimension of the phenomena investigated, a reason why it is important to analyse old data again and to take account of all the knowledge acquired; in particular, this presupposes the existence of demographic data banks, and 'historical methods that complement demometry have still to be invented' [*Gregory, 1979: 203*).

This explanatory analysis is based on two 'theories', or rather on two 'frameworks': that of stable populations already mentioned, and that of the demographic transition. To be sure, 'it is obviously not a question of two comparable 'theories', since one is primarily a tool for analysing the dynamic of populations, while the other is a framework for interpreting historically located demographic evolutions' [*Loriaux, 1985: 106*]. The approach seeks to locate the demographic dynamics observed with respect to these two reference points, particularly the latter, and to reveal the determinants explaining these dynamics.

The development of such approaches has led researchers to break out of the straitjacket of independent analysis for each of the phenomena examined (fertility, marriage rate, mortality, mobility). The relationships between phenomena such as infant mortality and fertility, marriage rate and fertility, marriage rate and migration are now investigated. The analysis also incorporates phenomena such as breast-feeding, the evolution of family structures and changes in the status of women, as well as contextual, community, institutional and cultural variables. Attention may be drawn here to the significance of the inclusion in the world fertility survey, a programme largely dominated by Anglo-Saxon demographers, of a questionnaire on fertility factors other than contraception, devised by French demographers.

POPULATION FORECASTS

One of the classic extensions of demographic analysis is the working out of population forecasts. The United Nations won renown in this area at a very early stage. As early as 1958, when the available data were still of very dubious quality, it made so bold as to draw up forecasts for the year 2000. It was estimated that, by the end of the twentieth century the world would support a population of six billion. The gradual refinement of the studies has not significantly altered this forecast since then [*Vallin, 1986: 78*].

The time scale of the forecasts has gradually been extended. For the year 2025, the United Nations predicts a world population in the order of eight to nine billion, dominated by three massive population groupings, each of about 1.5 billion: Africa, China and India.

Finally, the UN has been daring enough to extend the time scale of its forecasts even further, to the year 2100, the end of the next century. What is interesting in this approach is that the UN foresees that the world population will have stopped increasing by that time and that it will have stabilised at around 10 or 11 billion inhabitants. The highly technical work involved in making such forecasts is very dependent on the hypotheses basic. After the 'great demographic scare' of the 1950 and 1960s, which gave rise to the term 'demographic explosion', the slowing down of the rate of increase in the world population in the 1970s led demographers, with the assistance of the theory of demographic transition, to contemplate such a stabilisation.

However, it is without doubt still necessary to wonder, as Léon Tabah does, about the relevance of such a hypothesis: if the currently very wide range of fertility and mortality levels in the various countries of the world were to converge,

> how is it possible to believe that a sort of demographic equality would gradually become established for that would imply either that the economic and social conditions of men and women would become equal, or that differences in economic, social and even cultural conditions would no longer have any influence either on fertility or on mortality [*Tabah, 1990*].

The need to go beyond purely quantitative analysis in an attempt to increase our understanding of demographic phenomena is again emphasised.

POPULATION AND DEVELOPMENT

Given the international institutions (UN Population Fund, World Bank, etc.) work and the sensitivity of governments to demographic issues following the International Conferences on Population held in Bucharest (1974)

and Mexico (1984), increasing pressure has been exerted on research about population and development in an attempt to turn it into a 'committed demography'. As the 'Mexico Declaration' indicates, 'in order to be realistic, policies, plans and programmes in the sphere of development must take account of the inextricable links between population, resources, environment and development' [*United Nations, 1984b: 2*].

The expression 'population and development' has gradually ceased to be merely a fashionable phenomenon to evolve into a new area of research. This area was first explored a long time ago with attempts at investigating whether any correlations existed between population growth and the growth of per capita income. These attempts proved inconclusive, and a recent article finally closed off this line of research [*Blanchet, 1985*].

One of the many reasons why this type of approach was unsuitable was precisely the existence of the 'inextricable links' between demographic variables and those associated with economic and social development [*Sauvy, 1959; 1963*]. 'The multiplicity of relationships between demography and economics and the frequent occurrence of situations of interdependence make it necessary to use a system as a theoretical framework of analysis' [*Veron, 1989: 16*]. This is the reason for the development of quantitative 'demo-economic models' in recent decades, the most celebrated undoubtedly being the BACHUE models conceived by the ILO, which comprise three sub-systems (demography, employment and productive system). However, even this approach has fallen prey to an excessive concentration on technique; 'the obvious preference of demographers for "tight" numerical analyses means that the discipline can avoid raising fundamental questions about the economic, political and social implications of the demographic evolution of populations' [*Gregory, 1979: 199*]. Moreover, the development of these quantitative models is made more problematic by 'the fragility of their theoretical frameworks' and their use 'in the absence of adequate empirical data'. It can thus be concluded that 'the age of the construction of large demo-economic models seems to have passed' [*Chasteland, 1988: 8*]. This does not exclude the continuation of academic interest in and further investigation of, the arguments and debates inspired by the ideas of T. Malthus (that demographic growth leads to economic stagnation) or E. Boserup (that demographic pressure encourages technological innovation).

Finally, the approach based on the integration of demographic variables into development planning that has been propounded for several years is experiencing the same difficulties, exacerbated by the general crisis in planning.

In conclusion, the study of 'population and development' seems to be proceeding more satisfactorily in the area of sectoral research, which is in fact an extension of problematics which underlie explanatory analysis: once

again, this is a necessarily multi-disciplinary approach, the aim of which is to investigate the demographic dynamics in a given field of activity (health, birth control, spatial mobility ...) in conjunction with the variables likely to modify them. Emphasis is placed on those variables that governments seek to influence through their policies: health, redistribution of wealth, national development, international migration, etc. The demographer's task is to put forward explanations that are likely to be used as a basis for action and to evaluate the programmes carried through.

This 'political demography' [*Chasteland, 1988: 1*] will not really be able to assert itself unless the underlying ideological assumptions are clearly identified and its proponents distance themselves sufficiently from the dominant neo-Malthusianism.

Francophone demographers have in fact generally distanced themselves from this neo-Malthusian ideology, in France and Canada as well as in Africa.

THE CONTEXT OF RESEARCH

The work described above is carried out by researchers operating within the research structures in various countries.

This research is today dominated to a very large extent by the United States, either directly, or through the intermediary of international agencies. In this context, Francophone research appears particularly flimsy.

France still suffers from the lack of importance accorded to demography in the universities. Most of the research on the demography of development is carried out in non-university institutions: INED and ORSTOM.

In Belgium and Canada, on the other hand, 'departments of demography' have been established at the universities of Louvain-la-Neuve and Montreal. These departments very soon began to play an important role in the demography of development, including training, at a time when the French institutions were virtually absent from the field.

In Francophone Africa two types of structure coexist: a few university departments (Kinshasa, Lomé, Oran) on the one hand and national or regional research centres (Bamako, Rabat, Yaoundé ...) on the other. In all cases, however, the research is still often 'very dependent on outside resources, both for the training of personnel, and above all for its finance' [*Tabutin, 1988: 417*]. This situation is very different from the one prevailing in Anglophone Africa, where many universities have a long-established tradition and a great deal of experience in training and research in demography.

As for the other Francophone countries (Haiti, Vietnam ...), their research structures are still very fragile.

This rapid survey shows the importance of Africa in research conducted in French on the population of the Third World. With a few notable exceptions, such as ORSTOM and the department of demography of the University of Montreal, which have research programmes on the Caribbean and Latin America, most of the work being done relates to Africa. This has clearly emerged from the analysis of the research community situation, presented in this article, and in the attached bibliography.

Fortunately, more and more people are becoming involved in population and development research, both in the countries of the North (Belgium, Canada, France) and in those of the South. In recent years an increasing number of French-speaking demographers from countries of the South have been submitting doctoral theses.

Publication is necessary for proper evaluation of the work carried out. Too often, studies written in French remain unknown because they are not published. The situation is beginning to change as a result of the establishment of journals of African demography, such as those published by the Institut de formation et de recherche démographiques (IFORD, Yaoundé) and by the Union for African population studies (UAPS).

Finally, this survey cannot be concluded without mention of the sources for research funding. In this respect, demography is undoubtedly in a more favourable situation than the other social sciences. Because of the sensitivity of governments and international organisations to population issues, the discipline often benefits from the availability of considerable funds: in this situation, the demographer's problem is knowing how to maintain his independence. If the economic crisis and structural adjustment programmes encourage those responsible to emphasise short-term management, the role of the demographers, working in a discipline accustomed to making a long-term view becomes all the more important.

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