## Groupe de Démographie Africaine

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# POPULATION SIZE IN AFRICAN COUNTRIES: AN EVALUATION

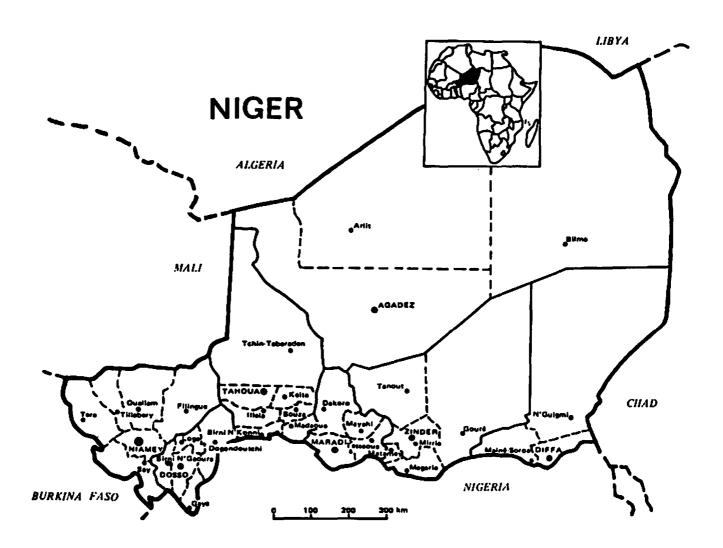
Volume I

Paris 1986

### TABLE OF CONTENTS

	Page
Introduction by F. GENDREAU	I
Angola by C.A. DA COSTA CARVALHO	1
Cameroon by A. NKOUNGOUROU EBONGUE and E. FOTSO	13
Chad by O.G. NASSOUR	33
Djibouti by A GUILLAUME	57
Egypt by F. DROSSO	67
Ethiopia by H. TESFAGHIORGHIS	89
Gambia by M.A. GIBRIL	105
Ivory Coast by F. BINET and C. PAULET	117
Kenya by Z.S. MUGANZI	127
Liberia by A.Z. MASSALEE	137
Madagascar by T. RABETSITONTA	149
Mali by H. SOW	183
Mauritius by E. VILQUIN	193
Mozambique by C.A. DA COSTA CARVALHO and M. FERREIRA DA SILVA	201
Namibia by by N.B. GOUWS	209
Niger by M. ROSET-CASENAVE	217
Nigeria by A. ADEPOJU and J.A. EBIGBOLA	233
Reunion by R. CLAIRIN	241
Rwanda by S. NIYIBIZI	267
Sierra Leone by A. THOMAS	279
Togo by T. LOCOH	293
Zaire by J. BOUTE and L. DE SAINT MOULIN	311
Zambia by M.S.C. MULENGA	335
Contributors	351
List of Tables	353
List of Charts	361
List of Maps	363

## NIGER Maité Roset-Casenave



### NIGER

### I. INTRODUCTION

The situation of the Republic of Niger with respect to demographic data is similar to that of many other French-speaking countries in Africa: until recently, very little reliable data were available; administrative censuses and a sample survey, now obsolete, have for twenty years constituted the only sources for the various population estimates and projections.

The first general census of population took place in October 1977; a second sample survey for 1980 is under consideration.

Niger covers an area of 1 187 000 km2 of which three quarters is desert or semi-desert populated by pastoral nomads and caravaners; the zone situated roughly to the south of the 15th parallel constitutes the only fertile band where the sedentary population is concentrated.

The present day frontiers of the country (cf. map) were fixed shortly before 1930, and contain six principal ethnical groups:

- 3 sedentary groups: the Zarma Songais, the Haoussas, and the Kanouris;
- 3 nomadic groups: the Touaregs, the Peulhs, and the Toubous.

The main towns are also concentrated in the southern part of the country with the exception of Agadez which is destined to grow rapidly with the increasing exploitation of various mineral resources.

### II. DATA SOURCES

### 1) Historical estimates

Enumerations of population were organised very early on by the colonial authorities and many of the original documents are to be found in the "Archives Nationales du Niger" (1).

<sup>(1)</sup> It must be noted that the recently created "Service des Archives Nationales" does not possess all the official records of Niger, a large part of which are to be found in Senegal.

The series of annual administrative censuses since 1920 (the year when Niger became an autonomous state) and some previous dates are available.

It has not been possible to find any other previous estimates of the population of Niger apart from the administrative censuses and research has been both hasty and limited due to the lack of records.

### 2) Official Sources

### a) <u>Censuses</u>

The former administrative censuses have been somewhat arbitrarily dissociated from more recent ones (since 1960) though they do not differ in either their aims or methods.

After the independence of Niger, the Ministry of the Interior has continued to carry out censuses through its representatives in the different administrative sub-divisions.

The purpose of these censuses remains the collection of taxes; their frequency is very irregular (every 2 to 5 years) and their timing varies among the regions.

It is these statistics which, up to the general population census in 1977, provided the data base for population measurement. The most recent have given rise to a publication of the Ministry of the Interior.

### b) Civil Registration

A registry has officially existed in Niger since 1956, but its observance remains very poor especially in rural areas.

Up to now, there has been no attempt to make use of the registrations or even to centralise documents.

A reform of the Civil Registry to be progressively implemented from 1979 onwards will provide for the centralisation of registrations by means of a monthly return completed at district level, and sent to the central administration.

The use of this information for demographich purposes will thereafter be assured, notably by the "Direction de la Statistique".

Simultaneously, a public information campaign to encourage everyone to make the necessary registrations at the office nearest to their place of residence is to be undertaken.

It is nevertheless to be feared that registration will, for a long time, remain quite insufficient to allow for an annual adjustment of the population figure.

### 3) Statistical Censuses

The Republic of Niger carried out its first general population census in October/November 1977. Provisional results are now available [28] and give the distribution of the resident population by sex and administrative sub-divisions: regions, districts and urban centres.

### 4) Demographic Sample Surveys

Two demographic surveys have been carried out in Niger: one for the sedentary zone and one for the nomadic zone.

The first one took place in 1959-1960 [14] in the sedentary zone which covers the south and the south-east of the country (see map); the town of Niamey was excluded from the survey as it had been the object of an exhaustive census in 1959.

The aims of this survey were to provide the following:

- an estimate of the sedentary population of Niger;
- a distribution of this population according to its principal demographic characteristics;
- an estimate of conventional demographic ratios;
- a knowledge of the basic social structures: households compounds;
- a documentary source for the agricultural survey which was to follow.

The survey in the nomadic zone took place in 1963-1964 [15]; this survey was somewhat experimental as it was the first to deal with non-sedentary populations.

Apart from establishing an appropriate methodology, its aims were as follows:

- a demographic study of the population;
- a study of economic movements;
- a study of food consumption;
- a quantitative and qualitative study of livestock.

Following a preliminary survey, the project revealed itself to be unpracticable and very costly, and consequently the survey was limited to the area of Tahoua and its immediate surroundings.

Even in the opinion of its proponents, the results obtained suffered from the difficult conditions under which information was collected and should be considered as orders of magnitude rather than precise values; furthermore, the initial objective, which was to get an estimate of the nomadic population in Niger, was abandoned in the preparatory stage of the survey, so that these results cannot be used for the present study.

For the record, it should be mentioned that a third more recent survey was carried out (in 1970-1971) on a sample of the population of Niamey and on a sample of the rural population of the Maradi and Zinder regions [17, 20, 23, 24, 25]; this KAP-type (1) survey studied 2 000 women in Niamey and 1 500 women in rural areas.

Preliminary work has permitted an estimation of the population of the town of Niamey in 1970, but the results obtained do not provide any data on the total population figure of Niger at that date.

### 5) Other Sample Surveys

In the context of the socio-economic account of Niger undertaken by the Government in the 1960s, two other nation-wide surveys should be mentioned:

- the agricultural survey of Niger [8] which took place immediately after the demographic survey and which provides some demographic information on the farming population;
- the study of food consumption in Niger [12]; this survey is complementary to the demographic survey of 1960 concerning sedentary zones. Unlike the study in nomadic zones, the former was divided into two parts. The report contains some general demographic data on the families of the sample.

### III. CRITICAL STUDY OF SOURCES

Of the previously mentioned sources, only three provide data for the country as a whole:

- the administrative censuses;
- the demographic survey of 1960;
- the general population census of 1977.

These three sources will be studied in turn in order to assess their reliability.

### 1) The Administrative Censuses

### a) Past Censuses

Through force of circumstance, these censuses could not be carried out in the whole country every year, and the annual figures conscientiously provided by the administration must often have been estimates.

Great accuracy is not to be expected of these data which it has not been possible to correct and which will be used in their crude form up to the 1960s.

<sup>(1)</sup> Knowledge, Attitudes and Practice.

A total figure of the population of Niger was published in each of the volumes of the "Annuaire Statistique de l'Afrique Occidentale Française" (Annual Statistical Yearbook of French West Africa); this published figure corresponded to the size of the population within the then current boundaries and as these boundaries moved several times, it is difficult to make comparisons between the publications.

For the figures quoted at the end of this chapter, the authors have endeavoured, as far as possible, to represent the population within the present frontiers of Niger: for example, between 1932 and 1947 the colony of Upper-Volta having been abolished, the Dori and Foda N'Gourma areas were linked to Niger and included in its census; their figures have therefore been subtracted from the total population.

### b) Recent Censuses

The customary drawbacks in this kind of operation are to be found in Niger which is no exception to the general rule.

\* The population concerned is the "de jure" population, that is to say the population registered for tax purposes; the non-taxable portion of the population also being counted nationally under the headings "children" and "old people".

Migrants moving within the national frontiers are still counted according to their village of birth even if they have been living for several years in another part of the country and more especially in the towns, which explains why the urban population figure given by administrative censuses is much lower than the "de facto" population.

Emigrants continue to be registered in their village of birth where their families pay taxes for them for several years (at least 3 years).

Immigrants who have resided in the country for several years also pay taxes and are therefore counted.

- \* Administrative censuses cover the whole territory and include the nomadic populations.
- \* Several factors lead to an under-estimation of the population in such a census:
- it is in the interest of any individual inclined to evade tax to avoid being enumerated: this is doubtless frequently the case with emigrants, foreigners, and nomads; even among the sedentary population, certain heads of household conceal the existence of some members of their families.
- because of the difficulties of the terrain, the bad condition of roads, the great distances to cover and the lack of staff, enumerators are often forced to collect information from some respresentative of the village or tribe, and are therefore unable to check their information on the spot.

- finally, the irregular occurrence of these censuses (up to 10 years apart) and the time over which they are spread makes it impossible to provide information on the whole country for any one point in time.

The use of such censuses for demographic purposes requires numerous adjustments which have been attempted several times in Niger; this subject will be returned to later.

### 2) The Demographic Sample Survey of 1960

This was the first and only survey to have taken place in Niger for strictly demographic purposes. Its particular interest lies in its providing data for nearly the whole country; in fact, the universe studied was 2 700 000 people out of approximately 2 900 000 living in the country at that date.

The sample taken represented 3% of the population divided into 6 strata.

Results refer only to the "de jure" population.

The methodological part of the report of the survey being very brief, no mention was made either of the difficulties encountered during the operations or of the quality of the data collected.

### 3) The General Population Census of October/November 1977

At the end of 1977, the Republic of Niger carried out its first general population census. This encompassed the whole of the population living on the territory at the time of enumeration, natives of Niger living abroad not being included.

Bearing in mind the difficulty of counting the nomadic population living in the pastoral zone, the region of Agadez was enumerated in three stages, district by district, in July, August and December 1977.

In the country at large, the operation lasted about one month, because of the unfavourable conditions for collection in the field:

- difficulty in recruiting census agents of sufficiently high educational standard;
- long distances to be covered on roads in bad condition;
- difficulty in locating nomadic settlements and families; it very often proved necessary to have recourse to a guide familiar with the region.

Enumerators met with a favourable reception everywhere even if, in some cases, heads of household clearly concealed the existence of wives and children of their households.

At the time of publication of the provisional results [28], an adjustment to the figures was made to take account of the nomads who were known to have avoided enumeration and of the wives and daughters who had been concealed on purpose.

A post-enumeration check was made about one month after the census and was carried out in 1% of the enumeration zones (33 out of 3 320 zones).

No clear conclusion was able to be drawn as the size of the areas concerned turned out to be too variable and their number insufficient.

### 4) Consistency between the different sources

### a) Administrative Census

Several population estimates and projections have been made on the basis of these censuses:

\* "Annuaire Statistique 1962 et 1967" (Statistical Yearbook): In order to give total figures year by year, the authors have extrapolated and interpolated the results available to them for each village or tribe. By this method they obtained for 1960 a figure near to that of the demographic survey:

Demographic survey 1960: 2 876 000

Statistical Yearbook 1960: 2 864 000

The annual growth rate observed lay between 2.6% and 2.7%.

\*\* Estimate of the population of Niger [11]: A projection of the population of Niger up to 1978 has been made on the basis of administrative censuses carried out between 1963 and 1968. It is those estimates which have in part been used in the Annuaire Statistique of 1969 and which stood until the general census of 1977.

A differential rate has been used for the various regions. Taking account of the growth observed between two counts in each region, for the country as a whole, the annual growth rate must have increased from 2.67% in 1964 to 2.79% in 1978.

The population thus projected for 1975 amounted to 4 600 000.

\*\*\* The Population of the Republic of Niger - Estimate for 1973 [33]: This estimate also uses the results of the two most recent administrative censuses by canton. The author has deduced an annual growth rate by canton and projected the population up to 1973 by adding a factor of 3% to the results of the last census to take account of an under-estimation in the observed population.

In this way, he arrived at a total population of 4 304 000 in 1973 while the figure obtained for 1973 in the study described above (\*\*) is 4 356 000. The mean annual growth rate deduced by the author was 2.2%, an estimate which he thought would be valid for the next five years, that is up to 1978.

\*\*\*\* Regional Accounts of the "Direction du Plan" (Planning Department) [5]: Each regional planning department established an account at the end of 1976: the demographic account is also based on the administrative censuses, but a finer analysis of growth rate has been undertaken; the authors have deduced from this separate rates for rural and urban areas and for nomadic and sedentary populations.

A mean growth rate by region was calculated as well as an average national growth rate of 2.8%.

The results of the pilot census carried out in preparation for the general census of 1977 had shown up a gap of approximately 20% between the administrative and the enumerated population; the authors of the regional accounts corrected the population of the last administrative census by applying an increase of 20% to the regional totals. It is to this new population figure that they applied the growth rates previously mentioned.

The population of Niger assessed in this way amounted to 5 122 000 at the end of 1976, while at the same date the estimate mentioned above (\*\*) indicates 4 727 000, with a growth rate of 2.77%.

### b) The Demographic Survey of 1960

After a study on fertility and mortality, the authors had estimated an annual natural increase rate of 2.5%, which seems a little low in relaton to what had been observed between two administrative censuses (cf. estimation presented above) covering the same period.

On the assumption that this rate is maintained for several years and that the age structure remains stable, projections have been made for the population in the survey zone; by adding to this the population which had not been accounted for, subject to the same growth rate, a population figure of 4 181 000 is obtained for 1975.

### c) The General Population Census of 1977

The population of Niger enumerated in October/November 1977 amounted to 5 098 000 persons.

By retaining the assumption of an annual mean growth rate of 2.78% (1) for the two years prior to the census, the population of Niger at the end of 1975 is estimated to have been 4 826 000.

<sup>(1)</sup> Rate observed in the estimates noted in section \*\*.

Table 67

NIGER - POPULATION SINCE THE BEGINNING OF THE CENTURY

YEAR	TOTAL POPULATION *	REMARKS	YEAR	TOTAL POPULATION*	REMARKS
1913   1914	960 000 894 967	  } Fluctuating  } frontiers.It is	  1946  1947	1 949 218 2 017 350	
1 :	845 886	X .	1947 1948	2 040 062	
1915	040 000	difficult to know exactly	1948	2 070 664	
1920		•	1949	2 126 322	
1921	1 084 043	ritory these	1951	2 163 784	
1922	1 157 460	)figures cor-	1952	2 227 506	
1923	1 149 295	respond.	1953	2 277 391	
1924	1 222 049	h	1954	1 2 2.7 001	
1925		Ď	1955	i	
1926	1 366 936	Ď	1956	2 547 881	
1927	1 427 536	Current frontiers	1957	2 628 685	
1928	1 441 413		1958	2 702 966	
1929	1 473 950	İ	1959	2 781 562	
1 -020		i		1	
1930	1 490 529	İ	1960	2 876 000	Demogr. survey
1931	1 542 801	İ	1961	2 948 406	
1932		İ	1962	3 040 673	
1933		İ	1963	3 332 258	
1934	1 480 000	Origin of these	1964	3 421 357	j
1935	1 492 000	)figures unknown		3 513 111	j
1936	1 465 013		1966	3 607 898	į
1937		İ	1967	3 705 370	
1938	1 558 372	j	1968	3 805 826	
1939	1 576 961	į	1969	3 909 372	
1940	1 618 555		1970	4 024 000	
1941	1 659 532	į	1971	4 125 850	
1942	1 680 452	•	1972	4 243 000	
1943	1 744 181		1973	4 355 769	İ
1944	1 829 888		1974	4 475 963	ĺ
1945	1 869 558		1975	4 599 785	[
į	İ		1976	4 727 292	
i	ĺ		1977	5 098 427	R.G.P. 1977

\* From 1913 to 1953: Official Records figures

From 1956 to 1976: Adjusted Administrative Censuses

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### IV. CONCLUSIONS

### 1) Results

Table 67 shows the population figures for Niger that it has proved possible to collect. Despite their apparent accuracy, they are in most cases estimates resulting from adjustments made by different methods.

From these figures an attempt has been made to determine the evolution of the population of Niger since 1915, the results of which are shown in Table 68.

Table 68

NIGER - PROBABLE EVOLUTION OF THE POPULATION SINCE THE

BEGINNING OF THE 20TH CENTURY

(Situation at 31st December each year)

YEAR	POPULATION	YEAR	POPULATION
1915 1920 1925	850 000 1 000 000 1 280 000	1950 1955 1960	2 200 000 2 500 000 3 200 000
1930 1935 1940 1945	1 490 000 1 500 000 1 700 000 1 900 000	1965 1970 1975	3 550 000 4 250 000 4 800 000

A stagnation is observed between 1930 and 1935, the cause of which cannot be easily determined since data are lacking for this period.

The figure shown for 1960 is slightly higher than the result of the demographic survey but it is believed that this study underestimated the nomadic population outside the scope of the survey.

Holding to the hypothesis of a mean annual growth rate in the range of 2.77% and 2.78% between 1975 and 1977, the population of Niger would have been 4 698 200 by 1st January 1975.

### 2) Sources

In conclusion, the recommendations for the improvement of the sources of demographic data are as follows:

- encouragement of the population to cooperate in Civil Registry to increase its usefulness;
- regular statistical censuses with improvement in data collection, notably among the nomadic populations;
- study of the principal ratios by means of single-round or multi-round sample surveys;
- a specific study of migration about which little is known at present.

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