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POPULATION ESTIMATES AND PROJECTIONS
IN THE FEDERATION OF RHODESIA AND NYASALAND

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**Population estimates and projections in the
Federation of Rhodesia and Nyasaland**

by

C.A.L. Myburgh

**Central Statistical Office
Salisbury**

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I. INTRODUCTION

1. In the Federation of Rhodesia and Nyasaland very nearly all the population estimates and projections are prepared by the Central Statistical Office. The only exceptions of any significance are firstly, annual estimates relating to the indigenous population, that is exclusive of migrants from neighbouring territories, published by the Territorial Government departments responsible for African affairs and secondly, occasional estimates prepared by the University College of Rhodesia and Nyasaland. However, even with these exceptions the Central Statistical Office is often consulted before the calculations are finalised.

2. Statistics relating to various aspects of the current population estimates are given in the publications of the Central Statistical Office and also quoted in a wide range of official publications of the Federal Government and of each of the Territorial Governments of Northern Rhodesia, Southern Rhodesia and Nyasaland. Many of these current estimates are also re-published in a number of private publications. However, projections into the future are rarely given in the official or the private publications.

3. Nevertheless, the Central Statistical Office does quite a large number of projections for the information of various government departments, committees, and commissions studying various social and economic problems. Each of these projections is prepared for a specific purpose with special attention to the particular topic under consideration by the user.

II. TYPICAL TOPICS STUDIED

4. The regular annual estimates prepared by the Central Statistical Office are confined to the total number of people in each of four broad racial groups, that is Africans, Europeans, Asians and Persons of Mixed

Racial Origin, in each of the three territories forming the Federation with supplementary totals for each of the main urban areas. As far as possible these are all strict de facto estimates. Other estimates published in the annual reports of the Territorial Departments dealing with African affairs generally give a far wider geographical breakdown of the people concerned and also some information on the broad age and sex distribution. Those estimates are generally based on the number of taxpayers and they are for the most part prepared on a type of de jure rather than a de facto concept; that is to say the people are shown by district of origin or birth rather than where they normally live or work. Furthermore they are for the most part confined to what may be described as the people of local origin exclusive of those Africans who, in administrative terms, are regarded as temporary migrants from neighbouring territories.

5. In addition to the annual estimates referred to above the Central Statistical Office also prepares quarterly de facto estimates of the territorial, racial and industrial distribution of the number of employees in the money economy.

6. In so far as projections into the future are concerned the typical topics considered may be summarised as follows:

- (a) Broad geographical and racial distribution, as given in the regular annual estimates.
- (b) The relationship between the locally born and the immigrant population.
- (c) The population distribution between:
 - (i) the money economy, and
 - (ii) the rural African sector.

- (d) Urban rural relationships in general.
- (e) Sex and age distribution with particular reference to:
 - (i) children of school age,
 - (ii) persons within the normal working age group,
 - (iii) persons aged 60 years or over, and
 - (iv) persons aged 21 years or over.
- (f) The demand for skilled and unskilled labour by industrial sectors.
- (g) The number of people who have completed a primary education, and
- (h) The income distribution of the population.

III. METHODS OF PROJECTION

7. The projections are generally arrived at from separate calculations in respect of each of the four racial groups within each of the three territories. This method is used for three reasons. Firstly, the users often require such a breakdown to help them in their studies; for example, in forecasting the future market for a particular commodity the accuracy of the calculation is improved by taking into consideration the territorial and racial variations in consumption patterns. Secondly, there are marked territorial and racial differences in rates of change which are of general interest. Thirdly, different techniques have to be used for the various races and territories in order to take account of variations in the quality of the basic population statistics.

8. In making projections relating to the European and Asian populations the Central Statistical Office makes considerable use of a long historical series of reliable census results, birth and death rates and migration statistics. The general approach is to examine the long-term trends of the

back figures and to project these into the future. However, the reliability of these projections, particularly those looking forward more than say five years, is seriously impaired by the fact that the overall rate of population growth is greatly dependent on migration which is difficult to predict as it is related to social, economic and political factors both within the Federation and in the world in general.

9. Projections of the number of people of mixed racial origin are based entirely on an examination of past census results, for migration from or into the Federation is insignificant and there are no satisfactory statistics on births and deaths.

10. In making projections of the African population the Central Statistical Office is seriously handicapped by the absence of an adequate historical series reflecting past trends. There is a wide range of reports dealing with various aspects of the population, but these refer to rather irregular studies of certain topics only or certain sections of the community and it is difficult to relate the various items of information to one another in order to arrive at a reliable picture of the whole community.

11. In estimating or projecting the Southern Rhodesia African population, the starting point is a large scale demographic sample survey undertaken in Southern Rhodesia in 1953-55. This provided details of birth and death rates and a figure of the total number of Africans of local origin or indigenous to Southern Rhodesia. This total is projected forward at 3 per cent per annum which is the 1953-55 rate of natural increase. To this is added the number of non-indigenous Africans working in the money economy as given by returns rendered by employers in a quinquennial census of employees and an arbitrary estimate is added for the unemployed and self

employed people from outside Southern Rhodesia. A further addition has to be made for the dependants accompanying the non-indigenous adult male migrant workers; this is on the assumption that the urban ratio of dependants to adult males as given by urban surveys undertaken between 1957 and 1960 is applicable to non-indigenous males in both the urban and rural areas.

12. The current estimates and projections for Northern Rhodesia are based on the de facto figure obtained from a demographic sample survey held in 1950. This is projected forward at the rate of 2.8 per cent per annum which is the rate of natural increase obtained in the 1950 survey. Adjustments for migration are then being made in the light of censuses of employees which show the number of Northern Rhodesia African employed in Nyasaland and Southern Rhodesia. Adjustments are also made for migration to and from the Republic of South Africa in the light of the South African censuses.

13. In the case of Nyasaland, the 1945 de jure census figure is projected forward at the rate of 2.2 per cent per annum which is the 1931-1945 intercensal rate of growth. The resulting de jure estimate has then to be adjusted for migration to other territories as reflected in the censuses of the Republic of South Africa and the estimates for Northern and Southern Rhodesia.

14. When it comes to the question of making a projection relating to a section such as children of school age, it is often possible to do no more than build up the best possible estimate of the present position and then project this at the same rate used in projecting the total indigenous population.

15. However, in a number of instances allowance is also made for the changing structure of the population. This is particularly the case when the money economy is under consideration as details of the number of employees in this sector have been obtained regularly in the past, namely every fifth year since 1921 in Southern Rhodesia, in 1931 and every fifth year since 1946 in Northern Rhodesia and in 1956 and 1961 in Nyasaland. The main complicating factor then becomes that of forecasting the rate of economic development, as this has an important bearing on such factors as the urban-rural distribution of population, migration (both between the territories within the Federation and also to and from neighbouring countries), income distributions and the demand for skilled and unskilled labour. Broadly speaking the projections relating to the money economy are made by examining back figures on the growth of each industrial sector and then making rather subjective assessments as to how each sector is likely to change in the future.

IV. APPLICATION OF PROJECTIONS TO POLICY MAKING AND PLANNING

16. From the enquiries received by the Central Statistical Office it is evident that population projections are used extensively in the framing of policy and the preparation of development plans. Overall projections and projections on special subjects have been used in the following fields:

- (a) Town planning
- (b) Industrial development
- (c) Agricultural development
- (d) Public transport
- (e) Housing
- (f) Education services
- (g) Health services

- (h) Man power surveys
- (i) Immigration policy
- (j) Power services
- (k) Electoral delimitation and franchise questions
- (l) Wages and labour policy
- (m) Social welfare, and
- (n) Unemployment studies.

17. A fundamental point that the Central Statistical Office emphasises repeatedly is that all the projections should be used with consideration caution. Apart from the unsatisfactory nature of our knowledge on the size and rate of growth of the indigenous people, a further complication with many of the projections is the fact that they have to be based on arbitrary assumptions regarding:

- (i) the future of economic development and also to some extent on
- (ii) government policy.

For example, a projection of the population of school age can be seriously upset by an alteration in migration trends resulting from either a change in the rate of economic development or a change in government policy which may well be influenced by the projections themselves. It is largely for these reasons that the Central Statistical Office does not normally publish its projections into the future. The element of uncertainty due to an insufficient knowledge of the present position and of rates of natural increase is being reduced steadily. A comprehensive de facto census of Africans has recently been completed in Southern Rhodesia and similar censuses are planned for Northern Rhodesia and Nyasaland in 1962. A pilot study will be started

soon to examine the practical difficulties of making a continuous study of births and deaths in permanent sample recording centres. The quality and coverage of migration statistics is also under examination. However, these improvements will not help to reduce the problem of trying to anticipate changes in the economic and political fields.