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**KRONIEK
VAN
AFRIKA**

**Special Issue on
Population Growth and Economic
Development in Africa**

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Special Issue:

Population Growth and Economic Development in Africa

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Population growth and economic development in Africa

Jan Sterkenburg / Introduction

This year, 1974 has been proclaimed World Population Year. The Economic and Social Council of the United Nations identified five principal objectives for this World Population Year, viz.

1. Improve knowledge of and information on the facts concerning population trends and prospects, and the relevant associated factors;
2. Sharpen awareness and heighten appreciation of population problems and their implications by individual governments, non-governmental organizations, scientific institutions and the media;
3. Provide effective education on population, family life and reproductive functions through formal and other educational systems;
4. Stimulate discussion and thinking on alternative policies, promotion of demographic considerations in development planning, and development of policies and programmes in the population field which individual governments might wish to undertake;
5. Expand international co-operation in population fields and supply increased and suitable technical assistance to countries desiring it, and in accordance with their needs.

Although the U.N. Document on this issue, *Purposes, Principles, Programmes*, excels in eloquent phraseology and explicitly emphasizes the U.N.'s neutral stand in population issues, the very proclamation of a World Population Year reveals an increasing concern about the world population problem, in particular population growth. For many, the underlying idea is: a decrease in population growth will more or less automatically result in an increase of economic growth. From here it is only a small step to the thesis: population growth is the main single cause of the defective socio-economic development of the under-developed countries.

The issue of the relation between population growth and economic growth was first dealt with by the Reverend Thomas Robert Malthus in 1798. He formulated his now famous law of population: the confrontation between the geometric rate of growth of population and the arithmetic rate at which subsistence could grow at best would lead to the tendency of population outrunning the available supply of food. Half a century later, Karl Marx reacted. Labelling Malthus 'a shameless sycopant of the ruling classes', Marx said that the real problem was not one of too many people or too little food but the private capitalists' ownership of the means of production. The current population growth rate in the under-developed countries has led to a revival of the Malthus-Marx debate. Both the fear of the threat of the economic conditions in the rich countries and a serious concern for the living standards of the masses of population in the under-developed countries have contributed to an increased awareness of the population issue. In contrast to the Malthus-Marx debate, not only food, but also environment and world resources are key words in this discussion. The well-known Stanford biologist Paul Ehrlich stated: 'In the long run the progressive deterioration of our environment may

cause more death and misery than any conceivable food-population gap'. Others, such as Weissman, have put a few pertinent questions in this respect. Is population growth the prime problem and population control the first solution or is it a question of too much food and too few people who can afford to buy it? And to the environmentalists: does the increased consumption of detergents primarily correlate with population growth or with merchandising budgets of households? (Meek, 1971).

Several studies and statements of organizations — e.g. the Pearson report, the World Bank, the U.S. Population Council — have branded population growth as the greatest single obstacle to the economic and social advancement of the under-developed countries. Two remarks should be made in respect to this. Firstly, economic and social advancement is usually defined in terms of an increase in gross domestic product or gross national income. Among economists an increasing awareness is noticeable of the limitations of such yardsticks as an indication of the standard of living. This applies to the under-developed countries in particular (Myrdal, Baster). Secondly, analysis of the relation between economic growth and population growth on the basis of the available statistical data reveals the complexity of this relation. Raulet points at the great number of variables which influence fertility such as literacy rate, per capita income, health conditions, degree of communications. Each of these variables has a different impact according to time and place. Kuznets does not find any significant correlation between changes in per capita product and population of forty under-developed countries over a period of twenty years. He criticizes the emphasis placed upon the role of capital formation in the process of economic growth and he pleads for the incorporation of a great variety of factors in analyzing the rate of growth of per capita product of a given country. In a recent study, Chesnais and Sauvy proceed from the assumption that, if economic models and theories were correct in stating that rapid population growth is an obstacle to economic development, the correlation between population growth and the growth of the income per habitant should be highly negative. The results of their correlation estimates — considered separately for developed countries in Europe and under-developed countries — over the last decade, demonstrate that the correlation coefficient is not significant for both types of countries. They conclude that the consequence of population growth has been different from what was expected and that economic progress resulted from various factors other than population growth.

This conclusion draws our attention to what has been called the process of fragmentary modernization, as a result of external and internal obstacles, as the crux of the problem of under-development (Hinderink). The strong decrease of mortality rates is chiefly caused by the export of highly advanced death-control technology from the developed to the under-developed world. In view of the success in reducing mortality by technological means, a similar technological approach is considered to be efficient for the reduction of fertility. The dependence of the under-developed countries heavily influences their production structure and inhibits the creation of the modern type of society required to facilitate a decrease of fertility levels. Such a society is characterized by industrialization accompanied by changed socio-cultural circumstances such as higher literacy rates, higher in-

comes, changed husband-wife relations, an increased feeling of security, redistribution of economic power. Instead modernization remains of a fragmentary nature. The under-developed countries are kept in a position of producers of raw materials and importers of manufactured goods. Attempts are made to curb the resulting high levels of unemployment by birth control programmes characterized by a biased emphasis on modern technology. It has become apparent that such programmes stand very little chance of success.

A detailed analysis of the processes which occurred in countries where fertility strongly decreased in recent years reveals the necessary pre-conditions. Prominent among these are the fundamental improvement of health conditions which leads to a decrease of mortality rates; and the beginning of a process of genuine socio-economic development. In fact, the population issue is neither a question of a ratio between the size of a country's population and the national income nor that of the world's population and its resources. It is rather a question of distribution. Ninety per cent of the world's annually exploited resources is consumed by the thirty per cent of the world's population living in the rich countries. A comparison between the population increase in the poor countries and further improvement of the living standard in the rich countries as to the effect on the consumption of world resources reveals that a doubling of the population of the poor countries has the same effect as a seventeen per cent increase in living standard in the rich countries (Adler-Karisson). An increase in the rich countries' living standards is considered a normal development, whereas the 'population explosion' in the poor countries is seen as a threat to the world's future. These articles intend to serve the objectives of the World Population Year; they aim to put the population issue in its proper perspective and to emphasize the real causes of under-development.

This special issue of the *Kroniek van Afrika* focusses on Population Growth and Economic Development, with particular reference to tropical Africa. In the first contribution, *Meilink* presents a review of the population factor in economic growth theory, with an emphasis on the recent theories. He arrives at the conclusion that the macro-economic apparatus used in growth theories is by itself still insufficiently developed to handle a complex issue like this. *Meilink* pleads for more case-studies with proper attention for the different socio-economic groups within the under-developed countries. Two case-studies are subsequently added. The one by *Bondestam* deals with under-development in Ethiopia. Expressing his doubts about the relevance of traditional development indicators, *Bondestam* prefers to describe the process of Ethiopia's growing dependence and the resulting internal economic structure in rather qualitative terms. He demonstrates that the present process of under-development leads to strong socio-economic differentiation. The fruits of this process remain in the hands of a small group of people; under these conditions any attempt at reducing population growth is in vain. A reduction of the population growth rate can only be achieved by measures which concentrate on the real cause of under-development. In the second case-study, *Sterkenburg* and *Luning* provide information on the actual changes in the income per capita in the period 1948-1967 and the factors responsible for these changes in a part of Tanzania. They devise a simple hypothetical model through which they calculate the effect of certain assumptions

in the demographic and economic fields. Their analysis demonstrates that certain structural measures in the economic field such as stable prices for export commodities have a much greater impact on the income per capita than a lower population growth rate.

After these case-studies, *Pradervand* challenges the ideological premises of western research in the field of population policy. The non-scientific premises inevitably lead to biases in research and policy formulations. The causes of the 'population explosion' are looked for and found in the technological sphere and consequently attempts are made to find the solution in the same direction. Such solutions are welcome since they do not endanger the position of the western countries and in this way attention can be diverted from the real causes of under-development.

De Jonge's case-study of the Nyakyusa of Tanzania shows that fertility is a dependent variable determined by socio-economic and cultural conditions. He explains the current fertility level in terms of cultural values and the recent changes in socio-economic conditions, particularly those which influence the marital pattern and marriage instability.

Nowadays many governments take legislative measures or initiate programmes in order to influence existing population trends. An integrated population policy encompasses many more aspects than birth control programmes alone. The contribution by a *Project group of the University of Utrecht* deals with population policy in tropical Africa. It gives particulars of the measures taken by the governments of the various countries in particular those in relation to population growth. The authors subsequently classify the various theoretical approaches to population growth and analyse the possible applicability of these approaches under various socio-economic circumstances. Finally, they compare official policy, theoretical approaches and socio-economic conditions for the limited number of African countries with a clearly formulated population policy. One of the countries which pursues an explicitly anti-natal policy is Kenya. The article by *Koesoebjono* and *Ndeti* elaborates on the problem of the implementation of such a policy. It demonstrates the difficulties of organization on the part of the Kenyan government and private organizations. The implementation of Kenya's population policy is, however, especially complicated by the prevailing social structure and the population's belief and value system. Both the general review of population policy in tropical Africa and the Kenya case-study reveal the important role played by foreign governments and foreign private agencies — the latter often largely financed by contributions from western governments. *De Gans, de Jonge* and *Kuysten* endeavour to find the forces behind the Netherlands' policy towards family planning activities in under-developed countries. It becomes clear that this policy is closely linked with the domestic political situation, notably the way the domestic population issue is viewed. Dutch foreign assistance in the field of family planning and birth control proves insignificant (about one per cent of Dutch development aid) but neither this element of the aid programme nor the policy on development aid in general aims at the necessary pre-condition for development, namely a fundamental transformation of the present international economic structure.

This issue on Population Growth and Economic Development in Africa con-

cludes with a systematic review of literature by Mrs. Gerold-Scheepers. This review contains the most important recent studies dealing with the demographic situation in Africa, population growth and economic implications, increases in rural densities and population growth and migration.

Jan Sterkenburg

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H. A. Meilink/ The population factor in economic growth theory

Introduction

In this article an attempt will be made to review briefly the role of population growth in economic growth theory and to make a few critical remarks on the applied methodology and the underlying assumptions. Emphasis is laid on the possible relationships between population and economic growth in the developing countries, but also Malthus' theory and the stagnationists' of the 1930's will be discussed in order to acquire a better understanding of the development in this field.

1. The classical economists

A fixed supply of natural resources, especially land, which limits the productivity of a larger labour force and thus of per capita food supplies of an increasing population was the central theme of Malthus' theory. Taking the quantity of land as fixed this would lead to a confrontation of the geometric rate of growth of population with the arithmetic rate at which subsistence could grow at best. Consequently, population always tended to outrun the available supply of food products. In fact, Malthus did not say that population would increase at a geometric rate of growth. It was only its tendency if left unchecked. He assumed that 'positive' checks (pestilence, famine and war) and 'preventive' checks (moral restraint with prudent postponement of early marriages until a family could be supported) would limit population to its subsistence level. This fear for insufficient food production was based on the acceptance of the law of diminishing returns.¹

According to this law the necessary increase in food production with given agricultural techniques would force the use of a less efficient combination of labour and capital on lands already under cultivation and/or the use of less fertile lands, resulting in increasing costs per additional unit of agricultural output. It was also generally believed among classical economists that there were few opportunities in agriculture for division of labour and application of innovations, which could be realized more easily in manufacturing where they result in increasing returns per additional labourer.

Malthus' pessimism with regard to the race between decreasing returns in agriculture and increasing returns in industry was shared by most economists at that time (around 1800).

But pessimism gradually disappeared as in the second half of the 19th century it became obvious that the rapid development of technological knowledge and its application in agriculture and manufacturing (introduction of new farming methods, new crops, improved transportation, economies of scale, division of labour, etc.) did clear the way for a more than proportional growth of production, thus sustaining the increase per capita output over a long period of time. In view of these events it is comprehensible that economists lost their interest in population questions and did not further investigate possible links between population and production. Consequently from then on in economic theory population growth was treated as an independent variable.

2. *The Stagnationists*

In the 1930's the thoughts of economists (Hansen a.o.) returned to the role of population in economic theory.

This time however it was the lack of a sufficient rate of population growth that worried them. In their theory of secular stagnation, autonomous investment, which was thought to be a very important income generating factor, was assumed to be dependent on:

1. the rate of resource discovery
2. the rate of technological progress
3. the rate of population growth

All of these factors showed a slowdown in growth at that time, which contributed to the fear that entrepreneurs would expect narrower markets and declining profits with as a consequence a decline in the growth of autonomous investment. A less rapid population growth was believed to influence this process because of the resulting decrease in demand for housing facilities and public utilities. The demand for these two items in particular requires considerable amounts of investment.

Critics of this theory pointed out that although in the past population growth had absorbed a great deal of savings, population increase is not necessarily essential for the absorption of these savings. Population oriented investment can also be replaced by other forms of investment. In other words, the composition of investment may change, but not the quantity.

Now it is interesting to note that in this theory the population factor is treated as a variable influencing the demand side of the economy whereas in Malthusian thinking it was associated with the production side (diminishing returns). Nevertheless population remained an independent variable. It was only drawn into the discussions because it evidently played a role in an economic process leading to stagnation.

3. *The Leibenstein/Nelson thesis*

After the Second World War increasing awareness of the growth problems of the under-developed nations and their extremely rapid increases in population have revived interest in population questions among economists. In the 1950's, Leibenstein and R. Nelson² considered the population factor as a dependent variable in their thesis of the so-called low level equilibrium trap³ and the minimum critical effort.⁴ They assumed a functional relationship between rising per capita income and changes in population growth rates. In this economic-demographic development process four stages were identified.

In the first stage (subsistence level of income combined with high mortality and fertility) children contribute to food production whereas the cost of rearing them is very low. In the second stage death rates tend to fall with growing per capita incomes but birth rates lag behind because it takes time for social attitudes to adapt to changes (the realization lag, as Leibenstein named it). Birth rates may even rise because the ratio of productive to non-productive years per child in the first instance increases. This raises the value of a child as a source of family

income and as a source of old age security. In the third stage a level of per capita income is reached where there is a clear decline in the value of the marginal child as a source of family income because the age up to which children are trained and kept out of the labour force gradually rises. The utility value is reduced to that of a 'consumption good' (from the economic point of view). Birth rates will fall considerably, narrowing the gap between death and birth rates. This fall in birth rates is of crucial importance because 'the more rapid the rate at which fertility decline sets in, the lower the rate of induced population growth and the less the extent to which population growth absorbs potential national income gains.'⁵ The fourth stage finally shows an almost closed birth-death rate gap resulting in a modest growth in population. Per capita income is considerably beyond the subsistence level at the first stage. The economy has overcome the major obstacle to its growth, i.e. the low level equilibrium trap.

The crux of the whole story is that Leibenstein and Nelson believed that only beyond a certain level of per capita income the rate of population growth was strongly negatively influenced thus clearing the way for sustained growth. Below such a point, the community would fall back to the Malthusian subsistence level because population growth would swallow up the realized per capita income gains. Altogether it is hardly surprising that Leibenstein and Nelson came up with their theory since at that time it was clear that some developed countries (especially Japan) had experienced this kind of demographic-economic development.

The impact of this theory on the thinking about growth problems of developing countries was considerable. What these countries needed in order to escape subsistence level was a rapid rise in per capita incomes within a short period of time. And since increasing per capita incomes were believed to be strongly linked to capital accumulation (savings) according to the popular Harrod-Domar model⁶, the rich countries could help to solve the growth problems of the poor ones by sending large amounts of capital (and technological knowledge).

This development policy of a necessary minimal critical effort or 'big push' as Rosenstein-Rodan calls it⁷, is this a logical result of the awareness of the demographic-economic mechanism in the now industrialized world.

4. *The Coale and Hoover study*

Together with the refinement of economic models for planning purposes, the population factor was introduced into such models. A macro-economic growth model consists of a set of relationships among the key economic magnitudes of a national economy. This model is constructed in such a way that the effects of changes in any variable on all the other interrelated variables can be traced. It is expressed as a set of equations with known or assumed coefficients of interrelationships and the whole is susceptible to empirical application and testing.

Early macro-economic growth models assumed a population growth rate and then treated it as a parameter, having an impact on the variables within the model but not in turn determined by them. However in the Coale and Hoover study on India⁸, population size and its rate of growth played a central role. Their aim was to provide a quantitative estimate of the effect of a declining fertility on the growth of per capita income. They assumed that a prime determinant of the rate of

economic development is public outlays plus private investment (F) and that the amount of funds available for such outlays will depend on both the national income (Y) and the level of average income per equivalent adult consumer $\left(\frac{Y}{C}\right)^9$

F is broken down into

- a those outlays which equip or assist active producers and thus raise aggregate output in a relatively direct and immediate way and
- b those which serve primarily the welfare of the population as a whole and have characteristically a diluted, indirect effect on output.¹⁰

F, in turn, is related to the growth of national income via the incremental developmental outlay to output ratio — a sophistication of the more familiar incremental capital to output ratio — assumed 3 in base year 1956, but rising to 3.6 in the last year, 1986, of the considered period.

F is increased during the 30 year period through a coefficient representing the incremental propensity to save (the proportion of extra income that is saved) which was assumed to be 30%.

With these assumptions a decline in fertility (they assume a 50% reduction in birth rates to be effectuated during the period) will lower the dependency ratio, meaning that more people fall within the productive age group. Thus total and per capita income are raised. Since savings are assumed to be a function of this total and of per capita income, these will also rise, thus inducing an increase in the available public outlays plus private investment (F) which, in turn, leads to a further increase in incomes.

The outcome of their calculations is that in the 30-year period the slower population growth as a result of lower birth rates (death rates are assumed to be constant) provides an income per capita some 38-50 percent higher than would occur with stable fertility. A further 25 years of reduced fertility would yield an income per capita about twice as high as with continued high fertility.¹¹

Obviously in this model the change in age structure served to accelerate the rise in total national income and income per head because of two forces:

- 1 a larger proportion of income was available for growth expenditure.
- 2 the proportion of low-yielding or late yielding welfare expenditures in total public outlays plus private investment was reduced.

5. Myrdal's criticism

Myrdal finds fault with the Coale and Hoover model on a number of grounds.¹² His criticism centres around their interpretation of the relationship between savings and income.

In the first place, non-monetary savings are excluded which in India (the country taken by Coale and Hoover to illustrate their theory) is however of great importance. In India there are three main savings sectors: the government, individual small business and large enterprise. The personal sector accounts for about 45% of total (monetary) savings, government for most of the rest and corporations, for a small but growing share.¹³ For each of these sectors Coale and Hoover assume that the increase in savings proportionately outdistances the increase in income per head which is however open to doubt:

a. Government savings (through taxes and surpluses of public enterprises) depend on many other factors than income per head. Progressive income tax rates play a much less important role than they do in Western countries and are not effectively enforced. The future amount of government savings depends much more on the kind of tax laws, the quality of the tax administration and the political acceptability of the laws than on income per head.

b. The 30% marginal propensity to save is much too high for India; the assumption of growing savings to income ratio for individuals is quite unrealistic because of the evidence of a tendency to *constancy* of this ratio in other countries. If the more realistic assumption of constant average propensity to save is introduced then the superiority of the low-fertility projection (inducing a rise in per capita income at the end of the period) is greatly reduced.

c. The amount of savings in the corporation sector depends largely on the opportunities for profitable investment which in turn depends on a large number of forces other than the growth of income per head.

In view of these criticisms, Myrdal made a recalculation based on the assumption of a *constant ratio* of savings to income which reduced the difference between the high and lower fertility incomes by two-thirds!

A second fundamental objection concerns the proportion of funds devoted to welfare expenditures. Policies in this field, especially those relating to the capital-intensive sectors of housing and construction and the dispersal or concentration of towns and industries can have varying effects on economic growth. These variations in policy influence the capital output ratio of the welfare expenditures and the proportion of funds that can be allocated to direct growth investment. Clearly different types of policies open up a substantially wider range of income differences between high and lower birth rates.

Leaving out this policy aspect and thereby presenting a highly simplified, mechanistic working of the system of relations is misleading and can hardly be considered as a step forward in the economic-demographic field of knowledge.

There is another important objection according to Myrdal. The analysis is set in the frame of the relationship between capital input and product output. It is inherently biased towards overemphasis on investment and towards abstraction from other growth generating conditions and thus towards isolation from all policy aspects. In fact, the very simplistic Harrod-Domar equation which links economic growth to only two factors i.e. the savings to income ratio and the marginal capital output ratio, is accepted as being a relevant theory. This, however, is easy to understand since in discussions of growth problems of the Third World, the Harrod-Domar 'model' was widely accepted in those years (beginning of the 1960's). Nevertheless this concept hampers or rather prevents consideration and measurement of e.g. the effect of different levels of consumption on labour input and labour efficiency.

Also the acceptance of capital rather than labour as a powerful income generating force is not surprising since we have seen that after Malthus' time (± 1820) income per head in fact could steadily rise because of a process of capital accumulation that made possible considerable increases in the labour productivity. However, statistical findings, published in the 1960's on the interplay of economic and

demographic factors has influenced existing views to a great extent. Kuznets examined the relationship between per capita product and population growth through a correlation of these two variables for 40 underdeveloped countries in the period 1950-1964 and concluded 'that the rate of population growth, among the underdeveloped countries has no uniform effect on growth in the per capita product. The variety of combinations is wide, and it is this mixture of relations that naturally produces an insignificant correlation.'¹⁴ Although statistical correlations do not help us to distinguish determining factors clearly, they can at least serve to exclude claims to primacy for single factors whose effects do not prove dominant in the empirical data. Easterlin also found the same insignificant correlation coefficient comparing the two variables for 27 developing countries.¹⁵ One other important fact came out of these empirical studies. They showed that the theoretically direct relationship between capital formation (or savings) and growth of output (Leibenstein, Harrod-Domar, Coale and Hoover) lacked statistical support. On the contrary, several studies showed the relatively modest contribution of capital and labour in the process of economic growth. Kendrick¹⁶ emphasized the relatively small contribution made since 1920 by increases in capital per worker, in contrast with the great contributions made by 'hidden investments' such as the improvements in human productive capacity. Kuznets in another study concludes: 'The scanty available data suggest that increase in inputs per head of manhours and material capital *combined*, accounted for less than *one fifth* of the secular rise in production per capita in western countries.'¹⁷ Also Solow observed 'that capital formation is not the only source of growth in productivity. Investment is at best a necessary condition for growth, surely not a sufficient one. Recent study has indicated the importance of such activities as research, education, and public health'.¹⁸ Denison, tried to fully allocate the growth of output in the U.S. among the relevant factors such as the level of education of the labour force, length of working days, economies of scale, spread of knowledge etc. and reached similar conclusions.¹⁹ Summarizing: this lack of knowledge about the contribution of specific variables and their quantitative meaning for growth processes illustrates the 'relatively primitive state of the art that prevails in the linking of demographic and economic variables'.²⁰

6. *The neo-Malthusian approach*

In spite of the statistical findings and theoretical progress in relation to demographic-economic interrelations; in spite also of the growing awareness of the great complexity of the matter among researchers; textbook writers and politicians in particular very often present the whole problem in the form of the so-called neo-malthusian version in arguing their desire to take birth-control measures. Their arguments can be summarized in the following formula

$$K = r(p + y)$$

Where K is required rate of growth of capital

r is the incremental capital output ratio (assumed to be a *constant*)

p is the population growth rate and

y the desired rate of increase in per capita income.

Assuming that population is increasing by 2% per year and $r = 3$, then 6 per cent of the national income must be saved and invested to maintain the present level of income per head. If an increase in per capita income of 2% is desired then 12% of the national income must be saved and invested, and if at the same time population is growing at the rate of 3 per cent instead of 2, then investment up to 15 per cent of the national income is required. This means that current consumption by households would have to be reduced in order to achieve the high rate of capital formation required. The 'model' shows that the higher the rate of growth of population the greater the material capital requirements needed to sustain the same rate of growth per worker and per capita product since a larger labour force (because of more rapid population growth) will require more capital just to keep its productivity from falling to a rate relative to the previous period (with slower population growth rate). Assuming further constant returns to scale and a given capital output ratio, the model is believed (other conditions assumed to be remaining equal,) to provide a simple picture of the influence of less rapidly growing population on the economy.

7. Kuznets' criticism of the New Malthusian approach

In two articles Kuznets²¹ sharply criticized the methodological framework, which in his view makes the entire analysis misleading. The effect of a higher rate of population growth is not only to require a larger share of total product to be devoted to capital formation but it also changes the age structure. The larger

Effects of Rise in Rate of Population Growth on Capital Requirements and Per Capita Consumption

	A-1 (1)	B-1 (2)	A-2 (3)	B-2 (4)
1. Assumed rate of growth of population, % per year	1.0	3.0	1.0	3.0
2. Assumed rate of growth of per capita product, % per year	2.0	2.0	0.1	0.1
3. Rate of growth of total net product, % per year (from lines 1 and 2)	3.02	5.06	1.101	3.103
4. Net capital investment required as % of net product (Incremental net capital-output ratio, ICOR, assumed to be 3.0)	9.06	15.18	3.303	9.309
5. Government consumption as % of net product (assumed)	10.0	10.0	10.0	10.0
6. Private consumer expenditures as % of net product (100 minus lines 4 and 5)	80.94	74.82	86.70	80.69
Age Structure of Population (based on UN selected data)				
<i>Total population = 100</i>				
7. 0-14 years old	26	40	26	40
8. 15-64 years old	64	56	64	56
9. 65 and over	10	4	10	4
10. Equivalent consumer units (lines 7 and 9 weighted by 0.6; line 8 by 1.0)	85.6	82.4	85.6	82.4
11. Private consumer expenditures, % of total net product percentile of equivalent consumer units (line 6 + line 10)	0.946	0.908	1.013	0.979
12. Total net product (assuming output of 100 per worker, i.e., per member of line 8)	6,400	5,600	6,400	5,600
13. Consumption per equivalent unit (line 11 × line 12 + 100)	60.54	50.85	64.83	54.82

proportion of the population in ages under 15 means a larger burden of dependency and thus, *ceteris paribus*, tends to lower per capita output.

But this is partly offset by the lower consumer requirements per head of the young. Therefore the term 'equivalent consumer units' is introduced.²² Kuznets assigns a weight of 0.6 for ages under 15 and over 65 and a weight of 1.0 to the population in the working age-group. He proceeds to compute the effects of a more rapid population growth (from 1 to 3 per cent) on per capita consumption and capital requirements within the neo-malthusian framework. The assumed incremental capital output ratio is 3. (see table)²³

His conclusion is as follows: 'The calculations suggest that raising the rate of population growth from 1 to 3% per year can presumably be accommodated by a reduction of about 15% in consumption per unit. Likewise with a given population growth rate, raising the rate of increase in per capita income from 0.1 to 2.0% apparently reduces per unit consumption only about 7% which would be made up in about three years!'

These results are puzzling and, as Kuznets remarks, cast doubt upon the adequacy of the underlying analytical structure because one may ask why, if this is a realistic model of economic growth, so few countries have become developed, for surely the sacrifice of a small fraction of growing consumption would hardly tax the capacity of the least developed economies and societies.

Neo-Malthusian analysis in one sense is clearly deficient because again it assumes that physical capital is the sole agent inducing growth of per capita product. Since capital formation is only a small fraction of total output, major changes in the former mean but minor changes in a large component of total output, such as consumption, and these minor changes can consequently work seeming miracles in the way of producing economic growth. No wonder Kuznets concludes, 'that a wholly unrealistic picture of the possibilities, and of the problems associated with population and economic growth is presented'.²⁴

He continues by examining the effects of a more rapid population growth rate on consumption when capital output ratio is not constant but variable, justifying this assumption with the following argument. At certain stages of growth items usually classified under consumption such as health and nutrition may be crucial to economic growth, and thus have the status of capital investment. And both the conventional and expanded capital to output ratio are influenced by *prevailing economic and social institutions* and are not fixed by technology except within broad limits. Varying the incremental capital output ratio from 3 to 5 results in an increase of about 100% in the reduction of per consumer consumption associated with an annual rate of population growth, of either 1 or 3 per cent. If it is raised to 10 there is a fourfold and a five-and-a-half fold increase in the reduction of consumption associated with respectively, 1 and 3 per cent population growth.

In view of these findings, Kuznets remarks that, 'the values to be used in measuring the effects of a high rate of growth of per capita product — for a given country at a given time — cannot be determined mechanically. No matter how rough the result will be, it does require the examination of all the conditions affecting the economic efficiency of a given country. And obviously these conditions include economic and social factors complementary to but not identical to the determinants

embodied even in the wider definition of capital in its relation to output. These factors should not be neglected and yet they are outside the conventional limits of the economic discipline'.²⁵ Thus an adequate analysis of the problems of relations between high rates of population growth, capital requirements, dependency ratio's, consumption levels and the like, would have to be extended to cover significantly different economic and social groups *within* the underdeveloped countries.

8. *Boserup's approach.*

A step in this direction was made by Mrs. Boserup.²⁶ She divided the (African) economy into three sectors. First, the sector located in the most backward regions where people produce for their own subsistence and try to earn some money by means of migrant labour. In these often sparsely populated areas the lack of incentives to produce an agricultural surplus is not due to land shortage but to the absence of local markets and of transport facilities. In these circumstances the motivation of the people to have large families is quite rational. Young men are needed as migratory money earners. Moreover, these young men have to clear the land under the system of shifting cultivation, while young women are needed to do a large part of the agricultural work and to raise more children. Another reason for this high birth rate is found in the existence of a very high infant mortality rate.

The second sector is that of cash cropping and subsistence food production which has a less extensive system of land use. Fallow periods are usually shorter and crop rotation systems are more often applied. This sector is partly monetized, there are more schools, and health conditions are better which results in a lower death rate. However birth rates are still high and this implies that in this sector population is growing fast. Large numbers of youths, having received a few years of schooling look for non-manual jobs in the urban centres. In this sector to have many children may be advantageous because the cultivation of cash crops sometimes yields a good income, but this cultivation of cash crops is a very risky activity since crops may fail or prices collapse. In such conditions having one or more members of the family in salaried employment is a kind of family insurance against bad times. Clearly, the question of how population growth is related to output growth in this sector has everything to do with world market prices and the international trade structure. These factors should not be left out in an adequate analysis of relationships.

The third sector is the modern, fully monetized, *industrial* sector situated around the capital of the country or around big ports. These urban areas undergo an enormous growth in numbers of 5 to 6% annually because of the large migratory flows from rural areas. This growth of the labour force creates severe employment problems. But simply linking these employment difficulties to excess population growth is incorrect.

The industrialization process can be effectuated in a large number of ways involving varying combinations of capital and labour. In actual fact production and investment decisions are to a large extent politically determined. For example, the predominance of non-indigenous ownership and of expatriate predominance in higher technical and managerial staff regularly leads to choices of machinery and technology reflecting the preceding experience and serving interests in advanced

countries and thus neglecting more suitable (employment oriented) choices. A dualistic structure of economic sector (modern capital intensive manufacturing versus stagnant low productive subsistence agriculture) may be the outcome.

9. *Type of development*

According to several authors, this unlinked development is not an unknown phenomenon in the African countries of today. Robson and Lury²⁷ state, 'This growth (of the industrial sector) has frequently depended upon the establishment of a few large scale projects. There are so far few signs of the emergence of a balanced size distribution of industrial enterprises such as characterize developed areas. The tendency in Africa is for a few giant firms (state or expatriate generated) to flourish amongst a large number of very small firms. Moreover these large enterprises tend to remain enclaves. Their linkages with other branches of the economy, either as markets for inputs or as suppliers of output for further processing, tend to be limited. It would be difficult to argue that much if any of the industrial development which has so far taken place has the propulsive character of leading sectors'.

In the past few years several case studies of African countries on the links between the growth of population and production have appeared.²⁸ Most of them deal with the major policy question of the implications of rapid population growth for the demand for housing, education, employment, health and social services. Some also provide illustrations of the isolated development of national production growth and population growth.

For example:

*Cameroun*²⁹ Biyong examines, among other things, the thesis that growth of GDP is only marginally related to population growth. After contrasting agricultural output (subsistence and export population) of the six federal administrative provinces with their respective population rates, he concludes that the figures display a lack of any concrete relationship. Growth of population appeared to exercise little or no influence on the growth of this sector's output. Other factors such as development of land (only 20% of arable land is under cultivation at present), the control of plant diseases, improved technology, and the world market and internal price development are thought to be more determining forces.³⁰ Concerning the manufacturing and commerce sector the same absence of correlation was observed. In this case the existing large excess capacity in industry was responsible. Growth of internal effective demand in the considered period (1966-'71) lays claim only to one third of this excess in production capacity. Biyong relates this situation to the export, outward oriented character of Cameroun's industrial activities.³¹ Concerning this point the ECA review report comments: 'Poor people with little monetary income can participate only marginally, if at all, in modern market structures and where population growth adds primarily to this group it may not mean equal increases in effective markets for more modern consumer items. Because of this, increases in the effective buying power of consumers can, percent for percent, have a greater effect on the development of many internal markets (and hence on manufacturing and commerce) than increases in the population itself.'³² Related to this feature is the way investment funds are

formed. The growth of investment depended on other factors than population growth. High income families could save substantial amounts of sums whereas the majority of the people had no savings at all. The country's investment resources were largely generated from savings in the public sector (taxes on major enterprises), saving by domestic private firms and foreign public and/or private funds.³³

Algeria: In Tabah's study the same weak association between GDP growth and population growth is registered. The rapid growth in national production was largely due to the petroleum and natural gas exports, to the growth of a complex modern industry and the extension of modern agricultural production in all of which capital intensive production methods were used requiring relatively small amounts of skilled labour.³⁴

Ethiopia: The Bekele and Bondestam study among other things, provides projections of population and income to illustrate that growing income differentials between urban and rural areas of the country will occur. When trends are extrapolated the GNP per capita of the total population rises from Eth. \$ 156 in 1968 to Eth. \$ 480 in 1998. But income in the subsistence agriculture areas will only modestly grow from Eth. \$ 75 in 1968 to Eth. \$ 116 in 1998.³⁵

In *Zambia* according to the ECA Report 700 European families accounted for 71% of agricultural sales in 1964. The remaining 29% was contributed by roughly 450 000 African families.³⁶ This illustrates again the absence of a direct relation between the majority of the Zambian population and the growth of production.

These brief illustrations serve to indicate that an adequate economic-demographic study should involve an analysis of the type of development that has been realized in specific countries.

Another important point is the student's implicit perception of population problems. 'One can look at a crowded ghetto and say the poverty and poor health of its inhabitants are products of over-population. Therefore the reproductive behavior of the poor should be changed. Or, one can say these people would be neither poor nor sickly nor crowded if they could get the kind of social acceptance, jobs and incomes that would enable them to have better housing, food and health care. In other words, how poverty and poor people are perceived makes all the difference. Likewise the notion of over-population is more a matter of perception and value judgement than of empirical data'.³⁷

That the exact nature of the economic-demographic links is also, to a certain extent, the result of a country's ability to organize itself in order to deal with a fast-growing population, is proved by the Chinese. According to Aziz³⁸ some basic characteristics of their system are:

1. The ability to mobilize the unemployed and under-employed labour force for improving the land, building dikes, and dams, digging irrigation channels, constructing roads and simply cultivating the land more intensively.
2. The ability to diversify its activities — first within the agricultural sector to forestry, fisheries, and animal husbandry and then to small industries, using

agricultural raw materials or providing inputs for agriculture. Local communities do not have to wait for government or industrial entrepreneurs to bring industries to their areas. They develop these industries according to their own needs and priorities, train their own workers, and keep the extra value that this process creates. This permits a gradual structural change in the rural economy that is in line with the factor endowment (a surplus of labour in relation to financial capital) and provides a step-by-step technological change.

3. The government's decision to feed the people and meet the other basic needs before mobilizing any surplus from it. The surplus created was used to modernize the structure of the local community itself rather than shifted to a few urban centres.

4. The strong difference in the system of planning as compared to that followed in many other developing countries. In the latter all targets are determined in a national plan and their achievement is sought through a combination of large public investments in expensive irrigation and infrastructure projects, and economic policies to influence private sector decisions. The primary merit of the Chinese system of planning is its emphasis on maximum exploitation of local resources for meeting local needs. Central planners are seldom able to identify all the potentialities for local development, and to establish the right order of priorities.

Aziz concludes, 'The startling fact is that China has within a short period of 24 years already abolished absolute poverty, unemployment and inflation'.³⁹ This development process was possible despite the fact that the Chinese population increased with an average of 2% yearly during the 1960-70 decade.⁴⁰

The above points are not made to say that population problems are easily solved by simply copying the Chinese strategy. However they do illustrate that studying population questions is a more (complicated) exercise than just assuming some highly simplistic macro-economic formula.

Conclusion: This brief review of economic thinking on the population question shows that the macro-economic apparatus used in growth theories by itself is still insufficiently developed in order to handle this very complex problem. A study of the relationship between demographic and economic factors should include some broader aspects of social organization in addition to the familiar economic variables.

Notes

¹ This law implies that as equal increases of a variable factor are added to a constant quantity of other fixed factors, the successive increases in output will, after a point, decrease.

² H. Leibenstein: *Economic backwardness and economic growth*. John Wiley and sons. London, 1957, and R. Nelson: *A theory of the low level equilibrium trap*. *American Economic Review*, December 1956, pp. 894-908.

³ High fertility, high mortality at a low level of per capita income.

⁴ An injection of capital leading to sufficient investment for sustaining economic growth.

⁵ Leibenstein *ibid.*, p. 168.

⁶ See § 5 for the details of this model.

⁷ See for a synthesis of theories of underdevelopment: B. Higgins. *Economic development. Principles, problems, and policies.* Norton & Co., New York 1968 pp. 343-360.

⁸ A. J. Coale and E. M. Hoover: *Population growth and economic development in low-income countries*, Princeton, New Jersey, 1958.

⁹ In calculating the population in terms of equivalent adult consumption, children under 10 are considered as 0.5 each, and women of 10 years and over as 0.9 each.

¹⁰ Coale and Hoover, *ibid.* p. 259.

¹¹ Coale and Hoover, *ibid.* p. 334.

¹² G. Myrdal: *Asian Drama 1968* Penguin books, Volume III, appendix 7: Approaches to economic effects of population changes, pp. 2063-2075.

¹³ G. Myrdal, *ibid.* p. 2073.

¹⁴ S. Kuznets: *Population and economic growth.* Proceedings of the American Philosophical Society, 1967, p. 191.

¹⁵ R. A. Easterlin: *Effects of population growth on the economic development of developing countries*, *The Annals of the American Academy of Political and Social Sciences.* January 1967, p. 106.

¹⁶ J. W. Kendrick: *Productivity trends in the United States*, Princeton University Press, 1961.

¹⁷ S. Kuznets: *Modern economic growth.* New Haven Yale University Press 1966, p. 491.

¹⁸ For example, R. Solow: *Technical progress, capital formation and economic growth*, *American Economic Review*, 1962, pp. 76-86.

¹⁹ F. Denison: *The Sources of economic growth in the U.S.A. and the alternatives before U.S.* Committee on Economic Development, supplementary paper, 1962, p. 13.

²⁰ E. M. Hoover: *Basic approaches to the study of demographic aspects of economic development: economic-demographic models*, *Population Index*, April-June 1971, p. 73.

²¹ S. Kuznets: *Population and economic growth.* Proceedings of the American Philosophical Society. 1967 p. 170-193 and S. Kuznets: *Economic aspects of fertility in the less developed countries*, in: S. J. Behrman, L. Corsa and R. Freedman (eds.) *Fertility and Family Planning: a world view.* University of Michigan Press. 1966, pp. 157-179.

²² As was done by Coale and Hoover, see § 4.

²³ Four cases are chosen, see line 1 and 2 in the table which is taken from Kuznets (1967).

²⁴ Kuznets, *Population and economic growth*, *ibid.* pp. 177-178.

²⁶ E. Boserup; *Population change and economic development in Africa; Paper for a seminar on population and economic growth in Africa; Leiden 1972.*

²⁷ P. Robson and D. Lury (eds.) *The Economies of Africa*, George Allen and Unwin Ltd. London, 1969, p. 66.

²⁸ United Nations Economic Commission for Africa; *African population conference*, Accra, Ghana, December 1971. See: *Population growth and social and economic development in Africa (a review and discussion of country case studies)* ECA, December 1971. Further quoted as ECA review on Accra conference.

The demographic transition in tropical Africa; Proceedings of an expert group meeting; Paris, 6 November 1970. OECD. Paris 1971.

S. H. Ominde & C. N. Ejiogu (eds.) Population Growth and Economic Development in Africa, London 1972.

²⁹ Boniface Biyong, Effet de l'accroissement de la population sur la croissance économique, United Nations Economic Commission for Africa, African Population Conference, Accra, Ghana, December 1971.

³⁰ Biyong, *ibid.* p. 5.

³¹ Biyong, *ibid.* p. 11.

³² ECA review on ACCRA conference, *ibid.* p. 37.

³³ Biyong *ibid.* p. 20, 21.

³⁴ ECA review on Accra conference, *ibid.* p. 37.

³⁵ M. Bekele and L. Bondestam, Macro case study: Ethiopia, United Nations Economic Commission for Africa, African Population Conference, Accra, Ghana, December 1971.

³⁶ ECA review on Accra conference, *ibid.* p. 18.

³⁷ Bernard M. Daly: The Chinese approach to rural development in Cooperation Canada, Canadian International Development Agency nr. 12 February 1974, p. 24.

³⁸ Sartaj Aziz in: Who actually perceive the problem? International Development Review, vol. XV number 4, 1974, p. 2.

³⁹ S. Aziz *ibid.* p. 7.

⁴⁰ Trends in developing countries, World Bank 1973. table 1.2.

Lars Bondestam / Underdevelopment and economic growth in Ethiopia

1. *Introduction*

Ethiopia occupies a unique place in the history of Africa, since she was never colonised (with the exception of Eritrea, which is now a province of Ethiopia). Even during the short five-year Italian occupation, few people in the country accepted this foreign domination and wide areas were never brought under Italian control.

Before the Italian occupation, there had been limited external influences on the economy, although the railway, Addis Ababa - Djibouti, was run by the French, banking was mainly in the hands of the British, and much of the business run and controlled by Greeks, Armenians and Arabs. The monetary sector of the Ethiopian economy was however rather insignificant. Small-scale trade was mainly characterized by barter, and before the 1940's the coin was little known outside the few big trade routes.

Even if the Italian occupation cannot be regarded as a colonization in the strict sense of the word, which would imply among other things an economic domination by an external metropolis, it had made an important impact on the development of Ethiopia in the post-war period. Ethiopian labour and Italian capital were used to develop the infrastructure. Security and other military needs, together with plans to exploit the resources of the country created a demand for communications. In only three years, more than 600 kilometers of roads were constructed particularly in the northern part of the country. This had an enormous impact on long-distance trade, on the pattern of migration, urbanization and on the economy in general.

The occupation also had an indirect impact on the subsequent political and economic development of Ethiopia in that it opened up the country to a greater extent to foreign interests than ever before. In 1941, after the Italian troops had been defeated by Ethiopian and British forces, the administration of the country was partly taken over by British advisers. The Italian rifle was replaced by British pencils — a development, which was not expected by the Ethiopian elite which badly fitted the political structure around the emperor, and which therefore did not last long. The British elite in the administration was replaced by other foreign interests among which the Americans became dominant.

Ethiopia's geographical position along the strategically important Red Sea, as a link (or a buffer) between the Arab countries and East Africa, coupled with the fact that it was one of the very few independent African states, made it attractive for American political, military and economic interests. These interests sought a strong foothold in this part of Africa, especially since the Americans had no or few possibilities to establish themselves in the already occupied British and French colonies. Consequently, an agreement was signed between the US and Ethiopian governments in 1953¹, which gave the former almost unlimited military rights in Ethiopia, including the establishment of a military base in Eritrea (Kagnew Base), at present still masquerading as a 'communication base'.² As a compensation

for this 'hospitality', the US government committed itself to participate in the development of Ethiopia's economy. This exchange of assistance later became indispensable for Ethiopia. USAID started aid activities in its new country in 1953, and the trade between the two countries subsequently increased. Five years later Ethiopia had, for the first time in history, a large deficit in its external trade. That is how the neo-colonial era emerged in Ethiopia.

2. *The Dependent Economy*

Ethiopia's neo-colonial status is being manifested in its economy, which is best described as a dependent one, with the following characteristics:

- export to the industrialized countries of mainly raw products, which constitute about 99 per cent of the value of total exports;
- import from the same countries of capital goods, luxury consumer goods, and of capital, the latter in the form of grants, loans, and direct foreign investment;
- local production of a limited range of consumer goods, which are easy to manufacture (the gross value of production of food, drinks, tobacco, textiles, leather and shoes constitutes more than 75 per cent of the total manufacturing industrial production); and
- limited development of a capital-intensive agriculture and industry, which to a large extent is controlled by foreign interests. This has directly contributed to the rapidly rising volume of unemployment and rural-urban migration.

Ethiopia's Third Five Year Plan³ implicitly underlines the fact that planning assumes the form of a dependent economy stressing the need for foreign investments and large scale commercial agriculture.⁴ Only lip service is paid to the need for improvements in the subsistence agricultural sector and to the necessity of building up an independent economy.

The balance of trade has been negative since 1958 and the deficit has now accumulated to more than Eth. \$ 1 000 million.⁵ In 1970 the value of exports covered about two-thirds of that of imports. One main reason for this imbalance is the decrease of the wholesale price index for raw materials compared to the price index for imported manufactured goods. The devaluation of the US dollar (half of the exports goes to USA, from where only 8 per cent of the imports comes) and the revaluation of the mark and the Yen (29 per cent of imports from Germany and Japan, but only 12 per cent of exports to these countries) have in later years aggravated this imbalance. Thus, while the value of imports has an average growth by 7.1. per cent annually during the 1960's, the value of exports has increased by only 4.3. per cent.

From total exports, including re-exports in 1970, the export of the three main products — coffee, oil seed and hides & skins constituted together almost 77 per cent, while coffee alone accounted for more than 61 per cent. A major part of the trade is with the industrialized countries, from which as much as 79 per cent of imports came in 1970 and to which almost 81 per cent of exports went in the same year. In summary, Ethiopia's dependence on a few raw export commodities and on a few countries for her exports is reflected in the fact that *almost half of its total exports is coffee to the USA.*

The large trade deficit makes the import of capital a necessity, but it is also true

Destination	1970 export of (in %)		
	Coffee	Other products	All products
USA	48.4	2.1	50.5
Other countries ⁶	13.1	36.4	49.5
All countries	61.5	38.5	100.0

that the industrialized countries' 'willingness' not only to give and lend money to, but also to invest in Ethiopia ensures that this deficit is maintained. The net indebtedness is rapidly increasing and in 1970 it had reached Eth. \$ 480 million, of which 183 to IBRD and IDA, 157 to USA and 140 to other bilateral lenders. It is estimated that debt servicing (repayment + interests) constituted as much as 80% of the new loans and grants and 18% of the value of exports in 1970. In the same year almost 60% of Ethiopia's capital budget was financed from external sources.

Since the largest amount of bilateral loans has come from the US, a closer study of the US government's motives and of the conditions attached to these loans is worthwhile. Ex-president Johnson, among many others, has clearly emphasized the underlying intentions in his Baltimore speech.⁷

'Our foreign aid programs constitute a distinct benefit to American business. The three major benefits are:

1. Foreign aid provides a substantial and immediate market for US goods and services.
2. Foreign aid stimulates the development of new overseas markets for US companies.
3. Foreign aid orients national economics towards a free enterprise system in which US firms can prosper.'

How this policy is viewed in Ethiopia is best described by an Ethiopian Government official in the Ministry of Finance⁸:

'No lending country has ever given cash for development projects, but the loans have always been utilised to secure equipment and machinery as well as expert and other services from abroad. (...) Almost all of the money secured by a country for development projects ends up in the donor country in one form or another. (...) The cost of the equipment and services for the project to be secured from overseas usually accounts for about 60 or 70 per cent of the total loan, (...) the remaining 30% or so is spent for consultant services, the largest portion of which is done by foreigners, nationals of the lending country. (...) In the case of United States loans, for example, all the goods and services have to be procured from America, the engineers must come from America, and the equipment has to be brought from America'.

A simultaneous development of the economies of the neo-colonies and of the lending countries lead to obviously conflicting interests with regard to 'aid'. Most often, and at least in the case of Ethiopia, it is not the borrowing country which benefits. The complaints about the cutting down of USAID are therefore misleading.

Moreover, a considerable part of the Ethiopian Government's capital expenditure is tied to specific projects, which are most often decided by the donors, as a direct result of its economic dependence. This means that less money is left for genuine rural development which should bring benefit to more people. It is obvious that the rural masses have not derived much advantage from foreign grants and loans. In fact, *foreign aid has been one of the contributing factors to a gradual process of polarization among the Ethiopian people into rich and poor.*

The money income of members of the upper class is mainly spent on imported consumer and capital goods, non-productive investments and services. Only a fraction of the national product is reinvested into the production sector. It is therefore claimed that the only possibility to achieve a rapid industrial growth is to rely on foreign investment, despite the fact that local capital is available.

Manufacturing industries have started from a narrow base, which explains the comparatively rapid increase in production measured in relative figures — 15 per cent per annum during the second half of the 1960's.⁹ This rapid rate of growth has not been paralleled by a proportionate increase in employment. Only about 80 000 people were employed in this sector (industries with more than 5 employees) in 1970. The number of employees increased by 3.3 per cent per annum from 1967 to 1970, which is much below the rate of population growth of 7-8 per cent in the urbanized industrial areas. This means that *unemployment is increasing in the larger urban centres — in absolute as well as in relative figures.*¹⁰ Actually, the number of employees per establishment *decreased* by 3.5% yearly, which is due to the high rate of technical progress. Thus, industries in Ethiopia are becoming more and more capital-intensive, which is reflected in, for example, a 11.3% annual increase in productivity.

The increasing degree of capital-intensity demands proportionally more skilled and semi-skilled workers, who are better paid than the unskilled ones. An estimated 4.7% increase in yearly wages per employee is therefore the result of the replacement of unskilled by skilled labour and not to an increase in the unskilled labourers' wages. In fact, *the low wages have remained more or less constant during the last decade.*

The very slow increase in manufacturing industry — measured in absolute figures — is officially explained in terms of the vicious circle in which Ethiopia's economy is caught: there is a reluctance to invest in manufacturing industries due to the small market for industrial products. The low purchasing power results from the fact that a small percentage of the population is regular wage-earners — due to the slow industrial growth, etc. Consequently it is maintained that the vicious circle can only be broken by a rapid increase in investments — particularly in the private sector. In other words, development is defined as economic growth, irrespective of the need to improve the level of living of the population as a whole. Profit-oriented private investments almost bound to be foreign, since both local technical know-how and local capital are not invested in productive activities in the country. These investments are generously encouraged by tariff protection, exemption from taxes for the first five years after commencement, duty-free import of machinery and fuel, etc. It should, however, be realised that private investments, whether local or foreign, cannot solve the problem of a high rate of unemployment.

The built-in capitalist pattern of these investments is a part of rather than a solution to the vicious circle.

Industry and large-scale trade are owned and run by foreigners and the local upper class. From total paid up capital in manufacturing industries 43% is owned by foreign companies, 19% by Ethiopian nationals and the remaining 38% are government shares, mostly in joint ventures; 76% of the wholesale trade in Addis Ababa is run by non-Ethiopians, mainly Italians, Indians, Arabs and Greeks,¹² almost three-fourths of the coffee export business is in the hands of foreigners.¹³ The means of production are mainly controlled by the richer urban stratum, and capital is therefore ultimately accumulated in the cities. This surplus of money among the upper and middle classes, combined with limited employment opportunities in the productive sector, create an artificial economy in urban areas, in that the service sector is gradually playing a larger role in the money circulation.

The abundance of manpower, unskilled as well as school-graduates, is reflected in long queues of people seeking work. Wages are governed by this imbalance in supply and demand. In 1969/70 wages and salaries in the manufacturing industry constituted only 11% of the gross value of production — a drop from 14% three years earlier. An unskilled labourer, whether a factory worker, night guard or servant, seldom reaches a wage of above Eth. \$ 40-50 per month (us \$ 17-22) — hardly sufficient for his own survival, and certainly not enough to support his family. Some evidence of the income distribution in Addis Ababa may throw some light on the stratification of its population.¹⁴ The lowest paid two-thirds of the population get less than one-fourth of total emoluments. These 150 000 people earn the same amount as the 8 000 people who belong to the highest paid group. *In the public sector alone, the average salary of the 2% in the highest paid group is 40 times as high as the average salary of the 18% of government employees, who belong to the lowest paid group.* A special study of 250 households in the capital (with at least one wage-earner in each household) revealed that 44% earned less than Eth. \$ 50 per month (to be distributed among the household members). The living conditions of these people are illustrated by the fact that *only one per cent of their total calorie intake originated from animal products.*

These few examples indicate some of the symptoms of the country's dependence on external capital. This capital, as well as the local capital and technical skills, is allocated to the profitable sector of the economy, manufacturing industry and — as we shall see later — commercial agriculture. Another symptom of this dependence is the stagnant — and sometimes deteriorating — situation for the people in the rural traditional sector, which is only allotted a fraction of the total development efforts.

3. Agriculture

3.1. *The crucial role of land ownership conditions.* The peasants constitute about three-fourths of Ethiopia's total population. Their present economic situation and their future fate are functions of the complexity of land ownership, which will be briefly outlined. For that purpose we can divide land tenure in Ethiopia into three main categories: communal, private and government ownership.¹⁵

Communal ownership, which occurs mainly in the five northern provinces, can

further be divided into 'the extended family system' and 'the village system'. Under the first system the land belongs to the family and can neither be sold nor granted to anyone outside the family. When a family member dies, his part of the land is equally distributed among his children. This results in a continuously smaller share per farmer as the population grows. A pronounced migration from the northern to the southern provinces and to the lowlands is partly a reflection of the scarcity of land available for the ordinary farmer — almost half of the holdings in the north are less than 0.5 hectare. This region is also the least fertile in the country.

In 'the village system', which is found only in the two northern provinces, Tigre and Eritrea, the land is the common property of the community. It is redistributed periodically (every 4-7 years) to members of the village. A person has therefore no individual title to his holding, which means that he has nothing to offer as security in exchange for loans. It also means that there is a lack of incentive for improvement. These factors are obvious obstacles to the technical progress which might promote higher yields in the north.

Private ownership of land was enormously increased by Emperor Menelik three generations ago. More than two-thirds of the measured land is now privately held, implying that the owner is free to sell or lease it. The uneven distribution of land is a major obstacle to a socially acceptable development of agriculture in the southern provinces. So, for example, in Hararge province, one of the largest provinces in the country, 75% of the total measured land is held by 2% of the landowners, and out of this 95% is owned by two persons.

It is estimated that about 47% of all peasants in the country are tenants.¹⁶ Not more than one-fourth of these tenants have some land of their own. Two-thirds of the tenant population, corresponding to one-third of the total farming population, is concentrated in one-eighth of the cultivated land area of the country.

The tenant situation is further reflected in the high rents paid to the landowners — one-third to two-thirds of the yield. More than 25% of the tenants still pay a tith (1/10 of the net income) to their landlords, despite the fact that this payment has been abolished by law. Moreover, it is not uncommon that a tenant is required to provide personal services to his landlord. Only 6% of the tenancy agreements are in writing and the landlord can chase the tenant from his land at any time without compensation for improvements. Kebede outlines the consequences of such arrangements for the development of smallholder agriculture:

'Briefly, because of the uncertain verbal lease arrangements, a tenant has no security on his rented holding. Consequently he lacks the incentive to invest or improve his farming methods. Similarly, due to the uncontrolled exorbitant rent or share cropping arrangements, and on account of unconditional eviction without compensation, the tenant lacks adequate incentive to utilise modern inputs such as fertilizer and improved seeds. Furthermore, for the majority of the tenants money is a scarce commodity, and interest rates are high even for secured loans. For a tenant who does not have much to offer as security the interest is made even more exorbitant. In view of all these adverse conditions, it is unlikely and unwise for a tenant to borrow and invest on his rented holding. Assuming a tenant was to be unwise and invest in improvements on his rented holding, on the basis of share

cropping arrangements his share of the incremental output often covers only his cost of input, because usually half of the tenant's output has to be given to the landlord'.¹⁷

Arable *government land* constitutes about 10% of the total land area of the country. Little is used for state farming, much is misused after being granted to the urban upper and middle classes who already have other means of income (most of them use their land for speculation or keep it idle), and the rest is not yet developed. In short, due to the absence of proper planning, large areas of cultivable land remain idle, while at the same time the majority of Ethiopia's peasants struggle for survival on holdings of uneconomic size.

In northern Ethiopia, where communal ownership prevails, we find the least fertile areas and also the poorest people. With a few insignificant exceptions, this part of the country has been 'forgotten' in the development planning and it is in the first place the northerners who have been struck by famines several times, most recently in 1973 when the lives of about 2 million people were said to have been threatened by lack of food. The poor quality of the land and the special type of landownership make this region less attractive for commercial development — at least compared with the southern parts, which are relatively fertile and where private ownership conditions facilitate a transfer to commercial agriculture. The third category, the government land or State Domain, usually inhabited by pastoralists with no title to land, is another attractive field for commercial agriculture. Thus, *the change in the agricultural mode of production, which is now taking place in the country, is concentrated in those fertile and potentially fertile regions where land can be leased or bought. That is how land ownership conditions should be interpreted in the context of the present capitalist offensive.*

3.2. *The transition to capitalist agriculture.* There are three main types of commercial agriculture in Ethiopia:

- a. production of cereals on big farms, which are fusions of several small plots of land, previously privately owned and cultivated by peasants,
- b. coffee plantations on privately owned land, mainly in the western parts of the country, and
- c. production of cash crops, like cotton, sugar, fruits and vegetables, on newly developed land, leased from the state and previously inhabited by pastoralists.

The three types exhibit the following common characteristics: 1. they have become a vital factor in Ethiopia's economy under the prevailing economic system, 2. they have led to a class polarization and to an undermining of the means of existence of the economically weaker groups of the respective regions, and 3. the development in the last two cases is strongly correlated with the imperialist interests in the country. We shall briefly discuss these three types of commercial agriculture with respect to their common characteristics.

- a. The process of mechanization of cereal production implies capital-intensive farming, which ultimately leads to eviction of 'surplus manpower' — tenants and small landowners. The latter are sometimes forced to sell their land. Their small pieces of land become incorporated into larger holdings, which finally reach the

size at which it may be more profitable to introduce mechanized farming. Based on certain assumptions, one can estimate that 35 000 to 40 000 peasant households have been replaced by tractors up to 1970, and even if the mechanization process will continue at a lower rate in the future, *it is likely that more than one million people, including dependents, will have left their land by 1980, due to mechanization only.*¹⁸

This development is chiefly noticeable in the central and southern regions, where the capitalists have concentrated their activities. The trend in this process will inevitably continue: the production from large farms grows, the supply of produce increases, the prices go down and the small peasants get less and less money for the small amount they sell on the market. This process results in an exodus from agriculture and an increasing dependence on the big farms, which are taking over the role as suppliers of food to the non-agricultural, particularly the rapidly growing urban population. A farming upper class, most often consisting of absentee landlords and urban dwellers, has crystallised. A continuously increasing portion of the developed land is owned by that class. Tenants live under the constant threat of eviction. The polarization between rich and poor becomes more pronounced.

b. The importance of coffee to Ethiopia's export and the foreign interests in the coffee business have already been discussed. Few studies have been made on the socio-economic effects of the increasing coffee production. However, the results from one study¹⁹ of a village in Kefa province may be typical of the situation in the whole coffee region in this province and probably in other coffee-producing regions as well.

Briefly, the results show that in societies, previously based on subsistence agriculture, an entirely new situation has emerged during a short span of time. It is characterised by specialised production and a cash economy. Various factors contribute to the concentration of the area under coffee to fewer and richer landowners. Money is further concentrated in the pockets of traders and merchants of various kinds, who establish themselves in the region. Transfer to a cash crop has gradually resulted in the pauperisation of small farmers and tenants, and a concentration of the production resources in the hands of a few. Eviction of tenants, combined with seasonal as well as permanent migration of coffee pickers only once a year, creates a seasonally uneven distribution of economic activity. That half of the year, preceding the harvest, is for many people characterised by deteriorating economic conditions with consequent under- and mal-nourishment.

c. The Awash Valley in eastern Ethiopia has until a decade ago been almost entirely used by pastoralists for grazing. One of the country's biggest rivers, the Awash, and its affluents penetrate this fertile area, whose development for agricultural production has been delayed for several reasons. In 1962 the Awash Valley Authority (AVA) was created as an autonomous body of the Government and charged with the development of the valley and its resources. The economic growth was rapid and out of a total of some 150 000 hectares of irrigable land, one-third is now being developed, mainly for cotton and sugar production. Ethiopian indi-

viduals and foreign companies are queueing to get concessions in the valley, but the control of the production is extremely biased in favour of the latter. About half of the land is in the hands of foreign companies, notably the Dutch H.V.A. (Handels Vereniging Amsterdam — more than 22% of the developed area), and the British Michell Cotts (almost 17%).²⁰ Only about 15% was managed by the Ethiopian Government, members of the Imperial family and Ethiopian individuals, and the rest, about 29% was administered by Sultan Ali Mira, who is the religious and administrative leader of the people of the Valley — the Afar). An Italian company recently obtained a concession of 5 800 hectares for the production of bananas, which will be exported to Europe. A Japanese firm has requested 10 000 hectares to grow alfalfa, which will be exported as animal feed to Japan, etc. The gross value of production has reached some Eth. \$ 90 million yearly. Although many of the plantations are still in their infancy, profits are impressive. Investments are recovered after only 3-4 years.

There exists no official calculation of the circulation of capital between the various interests and of the outflow of capital from the country due to the foreign dominance. Some general conclusions of a qualitative nature on the pure economic effects of the developments in the valley can thus be drawn. With respect to commercial agriculture in the Awash valley:²¹

- the total outflow of profits from the country has already surpassed the foreign investments in the valley and have probably accumulated to a sum even exceeding the total investments there;
- the total export of capital (profits on foreign investments; payments for imported machinery, equipment, insecticides, fuel, etc.; payment for services; interests, and the foreigners' personal savings abroad) is almost as large as the total import of capital (foreign investments and exports) plus savings due to import substitution;
- the transition from import to local production has meant a decrease in the state revenues;
- the transition from import to domestically produced sugar and cotton has meant a rise in the prices of these products, and has therefore not benefitted the consumers.

These are the broad economic results of the growth of capitalist agriculture in the Awash Valley, and these are the built-in paradoxes of capitalism itself when allowed to ravage such an economically weak neo-colony without restraint. But the human aspect of this development is, in a sense, even more discouraging. With the introduction of profit-oriented cash crop production along the river, the people, who have lived here more or less permanently since the 16th century, are now forced to find their pastures somewhere else. Since the grazing capacity of the land, to which they have been forced to move, is much lower than that of their original pastures, this eviction has led to such consequences as overgrazing, livestock starvation followed by diminishing herds, under- and mal-nourishment of the people and famine.

A great famine has stricken north-eastern Ethiopia in 1973. It was actually more than a famine — it was a catastrophe. It has been explained by lack of rain and by drought — a comfortable quasi-explanation, which aims at concealing the very

causes of a disastrous reduction of a population. The most exposed victims of this famine are the people of the eastern lowlands, of whom a majority live (or lived) in the Awash Valley. This human catastrophe is the culmination of a symptom of a 'development' process, which has been going on for almost a decade in the valley. The driving forces behind this process are the World Bank and other banks, which have pumped dollars into these commercial projects; the concessionaires and others — foreign and indigenous — who have ignored the fate of the people for the sake of maximizing profits; the Ethiopian government, which has encouraged this development in the name of 'economic progress'; and all those foreign advisers, who, alienated from Ethiopian realities, interpret 'development' as a matter of economic growth and accumulation of capital, and who, with these objectives in mind, encourage the government in maximizing the rate of agricultural production. This is the face of capitalism — the worst catastrophe that ever struck the people of the Awash Valley.

4. *Ethiopian Demography in Economic Development*

4.1. *A broad economic classification of the population.* The following table can in a sense be regarded as a summary of some of the economic realities in Ethiopia. When reading it, one has to note four important things: 1. a strong economic heterogeneity exists within each sub-group. 2. various sub-groups are inter-related; 3. there is a transition from the non-monetary to the monetary sector of the economy, i.e. the proportional distribution of the population over the monetary and the non-monetary sector is subject to changes; and 4. the economic situation of the population, has emerged as a direct or indirect consequence of Ethiopia's external dependence.

	Number ²² (million)	Per cent
<i>The monetary group</i>		
Urban population (more than 2,000 inhabitants)	2.3	9
Rural population in the non-agricultural sector	0.5	2
Wage-labourers on commercial farms	1.0	4
Tenants who pay rent in cash	2.5	10
Peasants who depend mainly on sale of surplus ²³	2.2	9
Sub-total		
<i>The subsistence group</i>		
Peasants in agriculture	8.5	34
of whom landowners	13.5	54
of whom tenants	(7.8)	(31)
of whom tenants	(5.7)	(23)
Pastoralists and other non-agriculturists	3.0	12
Sub-total	16.5	66
Total population	25.0	100

4.2. *Population and economic development.* Development is usually measured in standards which have no or little reference to Africa, and which usually conceal more significant aspects of development and underdevelopment. The fact that, for

example, GNP/capita is entirely useless as a measure of the general standard of living needs no elaboration here.²⁴ But this is actually the measure most commonly used, and that is why development is bound to fail. Despite all 'efforts' by foreign aid agencies to increase GNP/capita at a faster rate in their neo-colonies, the majority of the people still remains on the same subsistence level and often face conditions which impose a lower standard of life. The failure to develop 'the developing countries' has evoked a new framework of pseudo-explanations: it is not because GNP grows too slowly, it is rather because 'capita' is growing too fast. That is why we are now being threatened by the population-explosion bogey. That also explains the focus of interest on deriving exact estimates of the size and growth of the African population, and USAID's (through ECA) willingness to allocate US \$ 2 million of its funds for a population census and survey in Ethiopia in 1974. 'Population' has become the solution to development, but from a false premise — with emphasis on the number of people, whereas the qualitative aspect is of less concern.

'Population' is further regarded as a threat to political stability and thereby to foreign interests - political, military and economic. The probability of change is proportional to the growth of an unsatisfied population. Since it seems difficult to satisfy the people with the present approach to development, the efforts are now focused on the 'growth of population aspect'. In view of the fact that USAID has spent twenty years in Ethiopia to prepare the ground for a profitable exploitation of the country and its resources, it is understandable that their efforts are now concentrated on a political status quo, implying a control of the population, which will allow the US interests to accomplish what they have initiated.²⁵ Anyone with the slightest knowledge about the political and economic development in Ethiopia would agree that a sudden withdrawal of US military and civil assistance would create the conditions which would lead to political chaos within a week's time. It is in this context that one should understand the rumours spread by USAID-agents in Addis Ababa: 'Unless Ethiopia starts a population control programme, USAID ought to withdraw from this country'. This is the political background to such a programme which is designed to start in Ethiopia in a few years' time.

From this it is clear that the planners' estimates of population size and growth are not necessarily derived to serve the interests of the Ethiopian people. As long as a majority of the population is not touched by any social services or any centrally planned development, these estimates have little value in the general planning of Ethiopia's economic and social development.

How relevant is a discussion on population size when two-thirds are outside the market economy, when 20 million people have never been to a health clinic, or when 95% of the population has never seen the inside of a school? Does it make any difference whether the population is 26 or 28 million when the planners do not know the majority of the people, and when the majority of the people does not know its government? How relevant is an estimated 2.3% yearly growth rate, which does not take into account seasonal, regional and class variations? How relevant is such a figure when fertility ranges from infertility to one birth per mother per year, and when mortality ranges from a death rate of 10 per thousand among the upper classes to temporary mass-starvations among some rural peoples? There is no evidence that the pattern of reproduction in Ethiopia is irrational just

because a majority of the population does not have formal education. For the rural parents, delivering many children is more of an economic necessity and less of a random behaviour. Children contribute to agricultural production and they often are the parents' only economic and social security in old age. The high child mortality implies that security can be attained only by producing many children. Withdrawing this security by persuading people to limit their number of children is therefore irrational, economically unfeasible and practically impossible, unless such attempts are preceded or at least accompanied by economic and social development, including security in old age.

Foreign aid is by nature urban-oriented, and since this aid ties a large portion of the government's funds, little is left over for the development of the rural areas and small towns. Fertility and mortality rates, partly being functions of the availability of social services, are therefore also lower in the big cities. This phenomenon is also due to the concentration of the upper classes in these cities, who rely on other means of security in old age than a large number of children. The regional bias in distribution of education is reflected in the comparatively high primary school participation rate in Addis Ababa, where it is about 70% (of school-age population 7-12 years), whereas it reaches less than 5% in rural areas. School enrolment was increasing by some 13.5% in the capital but only by 9.9% outside during the 60's.²⁶ The bias in the distribution of medical and health services is even more striking. Addis Ababa with some 3% of the total population had 31% of the country's hospital beds in 1970 and 44% of all doctors, 45% of all hospital nurses and midwives, 18% of all community nurses and 31% of all dressers.²⁷

A study of the population of Addis Ababa showed that out of all children ever delivered by women with no schooling, 30% died, compared to only 14% and 3% of the children born by women with primary and secondary school education, respectively.²⁸ The same study also showed that 32% of the non-educated women had delivered four children or more, compared to only 21% of the women with primary school and 8% of those with secondary school. Interpretation is apparent: the educated have better knowledge and practice of modern child-care. A woman who is educated also easily marries 'upwards' compared to the one who never had the opportunity of schooling, i.e. she easily secures for herself an economic position which guarantees her of taking proper care of her children. Thus, the class structure is preserved and large variations in mortality and fertility remain.

The bias in the allocation of development funds and social services toward urban areas and the attraction to expected employment opportunities in towns, are some of the factors which all cause a relatively rapid growth of the urban areas in Ethiopia, at the expense of the growth of manpower in the agricultural sector, i.e. where it is supposed to be needed. Although only 0.5% of the rural population migrates permanently to towns each year, it is the young and middle-aged who move and leave the very young and old people behind.²⁹ In some agricultural districts, where landholdings are comparatively large, this rural exodus of people in their active ages has caused labour problems — a fact which further accentuates the economic heterogeneity in the country: struggle for land in some parts and lack of manpower in others.

5. Conclusion

Is Ethiopia underdeveloped? If the degree of development is measured in GNP/capita, doctors per thousand population, literacy rate, mortality rate, etc., then Ethiopia is definitely one of the least developed countries in the world. Kenya, for example, is classified by the World Bank and others as one of the most developed countries on the continent. But is Kenya with its enormous dependence on some industrialized countries, England in particular, with its means of production controlled by a few, notably foreign companies and individuals, and with its stagnant number of employees in the monetary sector, actually more developed than Ethiopia?

A deeper study of the actual living conditions of the people would probably lead to a redefinition of 'development' and 'underdevelopment', which would upset presently accepted definitions of problems, solutions and measures of progress. The World Bank list of countries, ordered according to 'degree of development', with the USA close to the top and Ethiopia almost at the bottom, would be shown to lack any validity. A new approach would not even result in a new list, because it would be realised that the various development variables cannot possibly be weighted against each other, and no two countries can therefore be compared with respect to 'degree and rate of development'. This ultimately implies that purely quantitative measures of degree and rate of development do not make sense. It is in line with this reasoning that an attempt has been made in this paper to give a more descriptive picture of Ethiopia's development (or underdevelopment) as reflected in its economic structure. The fundamental issue, as a basis for further 'development', is the degree to which Ethiopia is moving towards an intensification of its dependent status, and the measures which would be required to achieve a larger degree of true economic independence.

Although Ethiopia has far from reached the degree of economic dependence found in most other African countries, there is no doubt that the present transition to capitalism in Ethiopia is an effect of its increasing reliance upon export of goods and import of capital (aid *from* the industrialized countries), and that this transition implies import of goods and export of capital (aid *to* the industrialized countries).

An increasing deficit in external trade, due to the well-known conditions under which the neo-colonies trade with their industrialized partners, is balanced with import of capital — mainly in the form of 'aid', but to some degree also as foreign private investments. The donors usually put conditions on the utilization of their money, and, moreover, tie a certain portion of local funds to their projects. An increasing foreign influence is found in most sectors of the economy: 43% of all paid up capital in manufacturing industries is owned by foreign companies, 76% of the wholesale trade in Addis Ababa is run by foreigners, coffee exports are for almost three-fourths controlled by foreigners, more than half of the developed land in the fertile and promising Awash Valley is managed and mainly controlled by foreign companies. Sugar production in Ethiopia is monopolised by a Dutch company.

However, the biased allocation of resources in Ethiopia is not only a function of the direct influence of foreign political and economic interests in the country.

Also the internal ownership relations contribute to the accumulation of capital in the hands of a small group. At least half the total cultivated area in seven southern provinces (out of a total of 14) are holdings of 100 hectares or more, which are owned by 0.5% of the agricultural population. Half of the emoluments paid to government employees in Addis Ababa goes to the 16% highest paid. This economic bias shows a tendency to become even more accentuated as commercialisation of agriculture continues and as a continuously larger part of the urban upper classes becomes landowners. At present, there are no signs of improvements for the masses. In fact, the quality of life for many is declining and the struggle for existence is becoming more difficult.

Any change in Ethiopia's development strategy (including a land reform, i.e. a redistribution of land) that would lead to a disturbance of political stability is naturally avoided. Development in Ethiopia has reached a stage at which the Government's main concern is to sign foreign loans, which support a facade of progress, and to work for its own survival. One must assume that this is the last stage of development within the present political and economic structure. Once it is recognised that human development in Ethiopia is inversely proportional to the growth of GNP in the USA, the latter may face a forced withdrawal of its assistance. A change of the general policy in Ethiopia could then be expected.

It is too often stressed that the reproduction of population in developing countries is the result of unplanned and irrational behaviour and, therefore a purely biological concern. This biological phenomenon is presented as the main obstacle to socio-economic development, and it is suggested that an artificial reduction of fertility would contribute to the eradication of the most serious manifestations of underdevelopment. This is the view held by many 'scientists' who have not attempted a definition of 'underdevelopment' or an investigation of trends in births and deaths and their interrelations with the economic causes of misery, hunger and famine. These 'scientists' deny the fact that the causal connection is the reverse, namely that high birth and death rates and rapid population growth subsist as a consequence of the socio-economic conditions. A reduction in the fertility and in the rate of population growth can therefore only be achieved through means which concentrate on the very cause of this high growth rate, i.e. the unfavourable socio-economic conditions of the masses. In the light of the present situation in Ethiopia, there is therefore no room for a policy which aims at decreasing the growth of its main asset in the development process — its people.

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- 2 For further information on the US military assistance to Ethiopia, see *Hearings before the subcommittee on US security agreements and commitments abroad*, of the Committee of Foreign Relations, US: Senate, ninety-first congress, 2nd session, part 8, June 1, 1970, pp. 1881-1958.
- 3 *Third Five Year Development Plan, 1968-1973*. The fourth plan is not scheduled to

begin before 1975 since progress in the third plan has been very limited in most sectors.

⁴ 'The rapid development of commercial agriculture is the only way to get the relatively quick increase needed in agricultural exports. It will clearly be essential to induce more foreign private investment, and to import the needed managerial and technical skills. (. . .) If plans and projects are to be realised efficiently and quickly, reliance must be placed upon private initiative and enterprise, and particularly on considerable amounts of private direct investment from abroad. The Government will, therefore, formulate policies to encourage the investment of capital and skills for the development of large-scale agriculture, and agro-industrial complexes, bearing in mind *the desirability of close cooperation between foreign and local interests at every stage.*' Ibid, p. 191 (the italics are mine).

⁵ The data on Ethiopia's trade are taken mainly from *Annual External Trade Statistics, 1967, 1968, 1969 and 1970*, Customs Head Office and Central Statistical Office, Addis Ababa, and L. Bondestam, *Some Notes on Ethiopia's External Trade*, Ethiopian Nutrition Institute, Addis Ababa 1971.

⁶ Some of the exports to 'other countries' is export to Djibouti, subsequently re-exported to USA, etc., so the distribution of exports is even more limited than the presented figures suggest.

⁷ Quoted in Andre Gunder Frank, *Latin America: Underdevelopment or Revolution*, Monthly Review Press, N.Y. 1969, p. 134.

⁸ The interview was published in the English-speaking newspaper *Ethiopian Herald*, June 8, 1972.

⁹ The data on manufacturing industries in Ethiopia are taken mainly from *Annual Survey of Manufacturing Industry for 1969/70*. Ministry of Commerce, Industry and Tourism & Central Statistical Office.

¹⁰ The Labour Exchange Office in Addis Ababa could find employment for 26% of the registrants in 1968 — a figure which has continuously decreased and dropped to only 10% in 1971. Besides, a majority of the unemployed never register at all. L. Bondestam, *Unemployment in Addis Ababa, Asmara and Dire Dawa*, Central Statistical Office, Addis Ababa 1972).

¹¹ *Annual Survey of Manufacturing Industry*, *ibid.*

¹² *Report on Survey of Distributive Trade in Addis Ababa, January-March 1968*, Central Statistical Office & Ministry of Commerce, Industry and Tourism, Addis Ababa 1969.

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¹⁶ *Report on a Survey of X Province*, results from the National Sample Survey, 1st

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¹⁸ L. Bondestam, 'The Population Situation in Ethiopia', part 111, *On Family Planning in Ethiopia*, No. 3, August 1972, p. 102.

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²¹ L. Bondestam, *Mäniskor och Kapitalism i Awashdalen - Etiopien* (not yet published), p. 67. (translated from English - 'People and Capitalism in the Awash Valley - Ethiopia', which exists in manuscript only).

²² All members in the household are included.

²³ Defined as those who cultivate more than 2 hectares of land. This sub-group includes also some tenants (*Report on a Survey of X Province*, *ibid.*, gives sufficient data for the calculation of the percentage of peasants on holdings above a certain limit).

²⁴ For discussions on the validity of GNP and GNP/capita as measures of development, see, for instance, various articles in *On Family Planning in Ethiopia*, *ibid.*, and L. Bondestam, *African Statistics - Some Notes on their Collection, Reliability and Validity* (approximate title), SIDA, Uppsala, 1973 (under print). See also Tames Szentes, *The Political Economy of Underdevelopment*, Budapest, 1971, Chapter 1.

²⁵ A more detailed description of US interests in Ethiopia is given in L. Bondestam, 'Imperialismen i Etiopie' (in Swedish only), *Zenit - Nordisk socialistisk tidskrift*, Nr. 3, 1973, p. 26-39.

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²⁸ *Population of Addis Ababa, Results from the Population Sample Survey of October 1967*, Central Statistical Office & Municipality of Addis Ababa, Statistical Bulletin No. 8, Addis Ababa, July 1972, pp. 16-18.

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Jan Sterkenburg and H. A. Luning/Population growth and economic growth in Tanzania

A case study of the Rungwe District

1. *Introduction*

Most African countries show high rates of population growth. Recently published figures covering the period 1960-1969 indicate that 23 out of the 54 countries mentioned surpass the growth rate of 2.5 per cent per annum. Only ten countries, with a population of about 14 million, show a growth rate below 2.0 per cent per annum.¹ This strong growth of their populations highly complicates the attempts of African governments to achieve improvements in the overall quality — education, health — of the population.

The task of the government is further complicated by the limited opportunities for domestic saving. Low levels of domestic saving are again a direct result of the low income levels prevailing among large segments of the population. In turn, these low income levels are caused by the African countries' dependence on the industrialized world to sell their products. Due to this dependence the creation of sufficient investment capital locally poses often unsurmountable problems.² Consequently, African governments often have to rely on foreign public and private capital to implement their ambitious development programmes. The financing of development plans through foreign capital usually leads to reinforced and enlarged dependence.

Sometimes it is stated that, for most African countries, the population problem is not an urgent one. Admittedly, Africa is not heavily populated if compared to e.g. South East Asia. However, it should be emphasized that it is not only the absolute number but also the rate of population growth which determines the magnitude of demographic investments. It is a widely held view that the high rate of population growth is primarily responsible for the low standard of living in many developing countries. Consequently, the argument continues, measures in the demographic field, i.e. birth control programmes, should be implemented to raise the standard of living. Two questions are of relevance in this respect. Firstly, are the conditions prevailing in the developing countries favourable for such programmes? More fundamental seems a second question: what is the relative impact of measures in the demographic field compared to those in the economic field?

Apart from the high rate of population growth, the population is very unevenly distributed over the African continent and the majority of the population is concentrated in rather small areas. Tanzania is a clear example of this phenomenon. The majority of its population lives on a small number of fertile 'islands', such as Bukoba West of Lake Victoria and Kilimanjaro in the North near the boundary with Kenya. The Rungwe District, in the very south of Tanzania, bordering Lake Nyasa, which is also characterized by a relatively high population density, is therefore not a-typical but rather representative of many other parts of tropical Africa.

Evidently, as shown by Meilink, the macro- economic apparatus by itself is in-

sufficient for tackling the analytical problems connected with the population growth- economic growth relationship.³ Therefore, more disaggregative analysis is required; the following case study adds in a modest way to this stock of micro-studies. It analyzes the growth of population and the increase of money income in one of the more populated and relatively developed parts of Tanzania. In order to determine the extent to which the population factor and the economic conditions contribute to the level of money income attained by the inhabitants of the district, a theoretical model was devised based on certain assumptions in the demographic and economic field. The impact of an economic factor such as world market prices on the per capita income will be compared to that of population growth. Finally, the mutual dependence of population growth and economic growth will receive attention.

2. *The Rungwe District*

The most striking feature of Rungwe District's physical environment is its heterogeneity. The district comprises about 4700 sq. kilometers (1800 sq. miles). The eastern half has soils of volcanic origin and a high annual rainfall, while the western half is characterized by non-volcanic soils and a much lower precipitation. Within each of these two parts, there is a considerable variation in ecological conditions, mainly due to strong variations in altitude. Apart from the alluvial plain bordering Lake Nyasa, the whole district is very mountainous and dissected, with altitudes varying roughly between 500 meters in the Lake plains and 3300 meters in the north. Broadly speaking the following areas are distinguishable within the district:

- The Lakeshore, a flat area with high rainfall and volcanic soils; the main cash crop is paddy, other crops being bananas, maize, cashew nuts and cocoa.
- The intermediate zone, a gently undulating area with, in some parts, rather stony soils and a drier climate than those areas to the north and south of it; the main crops are maize, beans, bananas; some cocoa and mafura nuts are also found.
- Central and Northern Rungwe, partly hilly, partly mountainous, especially in the north; soils are predominantly volcanic and towards the north there is a gradual decrease in rainfall. This is the district's most important agricultural area. The main cash crops are coffee, tea and pyrethrum, the main food crops bananas, maize, beans and cassava.
- Bundali mountains, a mountainous area with great variations in altitude precipitation and soil conditions. The only cash crop is coffee whereas bananas, maize, beans and cassava are the main food crops.
- Bulambia, an area with much less favourable natural resources in terms of soils and rainfall. A distinct cash crop is lacking. The main food crops are maize, beans, millet and cassava.

The strong differences in natural resources within the district largely determine the possibilities to grow certain cash crops. This and other factors lead to strong spatial differences in income within the district. In addition, access to and the control of the various resources, cause substantial income differences within the areas.⁴ The differences between the areas can best expressed in terms of money income per household, since all areas achieve to a large extent the aspired self-

sufficiency in food production. The table below gives the particulars for the period 1967-1969.

Table 1. *Average money income per household for areas in the Rungwe District, 1967-1969 (in Tanz. shillings)*⁵

Area	Average money income per household					
	From agriculture only			Total money income including wage/salaries		
	1967	1968	1969	1967	1968	1969
1. Lakeshore	151	45	187	215	104	245
2. Intermediate zone	61	22	48	121	90	114
3. Central Highlands	171	138	225	342	261	345
4. Northern Rungwe	355	119	64	372	135	80
5. Bundali	143	117	251	189	158	291
6. Bulambia	10	13	14	52	53	53

The table clarifies two important phenomena: the enormous fluctuations in money income per household from year to year and the sizeable spatial variation in it. For the Lakeshore, these fluctuations are due to the lack of water control in the paddy growing areas; for Northern Rungwe, the dramatic decrease of pyrethrum prices and subsequent lower supplies are responsible for the deterioration of the income situation, whereas for Bundali and Central Rungwe the changes in the price of coffee and the resulting stagnation in total output are the main determinants for the fluctuations in the average money income per household.

The aspect of income inequality within the district, is a rather important phenomenon in view of Tanzania's policy of ujamaa, which aims among other things to reduce these inequalities. This aspect is, therefore, briefly mentioned here. For the rest of the argument we will, however, simplify the actual situation and work with averages for the district as a whole. Information on the Rungwe District is traceable to the beginning of the century. Although the data are scanty and of limited reliability, particularly concerning the population and its economic activities, there is no doubt that prior to 1948, there was very little noticeable development. Mission and government activities in the fields of education and health started at the beginning of the twentieth century; the first cash crops coffee and paddy being introduced in the same period of time. But both for cash cropping and health/education activities only a small fraction of the total population was involved.

This situation changed around 1948. Because of a shortage of primary products in the industrialized countries after the second world war, production had to be speeded up in the colonies. In Tanzania, an agricultural policy was formulated which aimed at improving the small farms by introducing cash crops (improvement approach), the resettlement of people in the uninhabited and sparsely populated parts of the country (transformation approach) and the reorganization of the marketing system by establishing co-operatives.⁶ In Rungwe District, the coffee production in particular was stimulated and a co-operative marketing system was set

up for coffee and paddy. Moreover in 1948 the first population census was carried out and reliable demographic data became available. That year, therefore, provides a good starting point for an analysis of the relation between population growth and economic growth in that part of Tanzania. The year 1967 is used as the final year for the analyses since in that year another census was held whereas our economic data also refer to 1967.

3. *Population Growth 1948-1967*

3.1. *Fertility and mortality.* The 1948 census gives a population of 236 148 for the Rungwe District. In 1967 the population had increased to 359 976; this boils down to a growth of 52 per cent over 19 years or 2.5 per cent per annum. With an overall density of 83.6 persons per square kilometer, the district belongs to the areas with high population densities in Tanzania. The population is far from evenly distributed over the district. There are enormous differences in density between the eastern and western half. The high densities are found in those places where cash crops are cultivated: 27 per cent of the area contains 54 per cent of the population. Thus, the majority of the population is concentrated in the most fertile and most developed parts.

Fertility, mortality and migration are the determinants for population growth. Lack of reliable data is a major constraint for an accurate calculation of fertility and mortality. The 1948 census only gave a breakdown by sex and age, whereas the 1957 census can not be considered very reliable. The sample survey connected with this census might have given an indication of the levels of fertility and mortality. Unfortunately, only 3 small areas in Rungwe district were included in the sample. In 1967 questions pertaining to fertility and mortality were included for the sample areas. A detailed evaluation study allowed for the necessary corrections, and made possible the determination of the age-specific fertility distribution. In 1967, total fertility appeared to be 6.72; this means that women have, at the age of 50, given birth to 6.7 children who were born alive. This figure coincides with a gross reproduction rate of 3.31. The crude birth rate in that year was 52 per thousand.

For the data on mortality we shall use those on retrospective mortality, i.e. the ratio between the reported number of children ever born and the number surviving, since those on current mortality proved too unreliable for analysis. On the basis of the Brass-Carrier stable population model and data collected in the census evaluation study, an infant mortality rate of 160-170 per thousand was regarded as being the most correct one. This means that the expectation of life at birth for both sexes combined, amounts to 37-39 years and that, the crude death rate attains approximately 25 per thousand.

In the period 1948-1957 the mortality level for the Rungwe District has definitely been influenced by an improvement in the medical facilities,⁸ and the greater availability of vaccines and antibiotics; a successful government programme in the agricultural field, i.e. the introduction of cassava as a 'hunger crop' and the expansion of the system of local markets resulting in a more varied diet for large segments of the district's population. The changes in fertility for the same period are more difficult to assess. Fertility may have increased as a result of better

medical facilities, while at the same time, the decrease in marriage stability will have an adverse effect.

3.2. *Migration.* The inhabitants of the Rungwe District have a longstanding tradition of migration. In the early period of British rule, they already went to the Coast to earn a money income. Later in the 1930's, when the Lupa gold fields were in the process of being developed, they readily seized the opportunity to find employment and sell their agricultural produce. During the second world war the direction of labour migration changed completely and people started to go to the Copperbelt in Zambia and the Witwatersrand mining areas in South Africa. The number of migrants strongly increased under the influence of various factors: ideas of higher standards of living were brought back by returning soldiers, which resulted in a greater demand for money and manufactured products, the demand for and value of cattle rose and good farming land started to become scarce. Finally, an increasing demand for mining labour coupled with higher wages and better transport facilities and recruitment activities was noticeable.⁹

The possibility of earning a money income by growing coffee reduced the magnitude of labour migration in those parts of the district where this cash crop was cultivated. In 1948 already some 12 500 men were employed abroad and in 1954-1955 this number was estimated at more than 14 000. This is equivalent to about 30 per cent of all males of 15 years and over. The high percentage of migrants had only limited effect on the fertility and mortality pattern and therefore did not cause any remarkable change in the population growth. The migrants were chiefly young men, who either went as bachelors or shortly after marriage, when their wife was pregnant. The percentage of men which made more than two trips was rather small. Consequently the effect of labour migration on the divorce rate was negligible.

The death rate at the mines as a result of dangerous work neither had a significant effect on the mortality rate of the district. A considerable number of men did not return to Rungwe District after the migration came to a standstill in 1963 by order of the Tanganyika Government. This caused a decrease in the sex ratio and allowed greater opportunities for polygamy. As is generally known, the number of children per woman is lower for women in polygamous households.

To summarize one must conclude that over the period 1948 - 1967 the effect of labour migration on the population growth rate was rather limited. Population growth over the period under review attained 2.5 per cent per annum. This means that Rungwe takes a middle position compared to other parts of tropical Africa.

4. *Economic Growth, 1948-1967*

Broadly speaking, economic growth is identified with the growth of per capita income. We fully recognize the limitations of this definition and realize that alternative yardsticks (e.g. degree of labour absorption, degree of savings and consumption, income distribution) could have been selected. However, in view of the available data we consider it the best yardstick for this particular study.

The measurement of income is a complicated issue in an economy which is dominated by subsistence agriculture: in 1967 97.6 per cent of the working population

was engaged in it; for 1948 this percentage must have been even higher. The farms of the Rungwe District, like those in many other parts of tropical Africa, place a high value on self-sufficiency in food production. As the district was still almost self-sufficient in 1967 and exports of food crops from the district (with the exception of bananas) and imports were negligible, changes in the economic situation between 1948 and 1967 can to a large extent be measured by comparing the value of cash crop production and per capita money incomes in the two years. The non-agricultural sector will be omitted from the analysis, apart from labour migration, since the relevant data is lacking. This will hardly influence the outcome in view of the negligible percentage of the working force employed outside agriculture.

4.1. *The economic situation in 1948.* Around 1930 arabica coffee was introduced as a cash crop in peasant agriculture and coffee production slowly but steadily increased. In 1948 the total output amounted to 390 tons. The year 1948 compared favourably with previous years; therefore the selection of this base year does not lead to an exaggerated growth rate.

The only other crop, which was marketed in significant quantities in 1948 was paddy. This crop had been cultivated in the Lakeshore area by peasant farmers since the beginning of the century. Since rice production fluctuates greatly from year to year, we have taken the 3 year average (1947-1949). The production figures have been gleaned from the Annual Reports of the Ministry of Agriculture. They should not be considered completely accurate, as sales took place both through co-operatives and by means of private trade. Since the latter returns are not fully reflected in the department's statistics, we have rounded off the paddy figures in an upward direction. Finally, a number of estates yielded a modest tea production in 1948. Of the total gross production value it is estimated that a quarter was paid out to hired labourers who are part-time farmers. The total amount of money income, earned by the peasant population was as follows in 1948:

Paddy	2600 tons at £ 19/ton ex-farm gate price =	988 000 sh.
Coffee	390 tons at 2 sh/lb (estimated)	1 716 000 sh.
Tea	210 tons of made tea at £ 250 × 0.25	262 500 sh.
Miscellaneous		33 500 sh.
		<hr/> 3 000 000 shillings.

To this money income from agriculture must be added the cash and goods brought back by labour migrants from South Africa and the Copperbelt. This should be valued at 3.3 million shillings.

4.2. *The economic situation in 1967.* The main changes in agricultural production over this twenty year period are: an expansion of the 1948 cash crops, including the introduction of tea on smallholders' farms; and a further diversification of the agricultural economy (pyrethrum, mafura, cocoa, cashew, bananas).

The following table shows the money values of cash and estate crops, as far as they are earned by the local population.

The table demonstrates that the three main cash crops, coffee, paddy and tea, accounted for 84 per cent of the total money income from agriculture in 1967.¹⁰

Table 2. *Agricultural Production in Rungwe District, 1967 (in 1967 prices)*

Crop	Tons	Value in '000 shillings	% of total value
Coffee	2112	5,761	37.1
Paddy	8020	3,591	23.1
Tea (estate labour)	4950	3,675	23.7
<small>(smallholder)</small>	146	265	1.7
Pyrethrum	226	1,033	6.7
Bananas	7500	900	5.8
Mafura nuts	515	155	1.0
Cashew	43	27	0.2
Cocoa	25	10	0.1
Others	—	100	0.6
Total	n.a.	15,517	100.0

4.3. *The factors determining economic growth.* Factors responsible for the growth of the coffee industry have been analyzed in greater detail elsewhere.¹¹ It was shown that a spectacular increase in coffee plantings and coffee production occurred in the period 1952-1960. The main factors which gave an impetus to this production increase, were: a stimulating price level and the introduction of a price differential system; the expansion of, and improvements in the road system, particularly in the Bundali mountains;¹² and the establishment and improvement of supporting services, such as the agricultural extension service and the co-operatives. These organizations made available the necessary inputs, including expert advice, and organized the marketing of the crop.

The factors which influenced the growth in rice output in the period 1948-1958 were: the population growth in the Lakeshore area which resulted in an expansion of the area under this crop; an improvement of the marketing organization of paddy by establishing co-operatives; and the introduction of ploughs which were either bought cash from incomes earned by labour migration, or on credit from the newly established co-operatives. Of minor impact was the occupation of land in the rice area by coffee farmers from the northern coffee growing areas and the introduction of tractors during the 1960's.

The increasing quantity of consumer goods which became available in the area through the activities of private traders and co-operative societies had a favourable influence on cash crop production in general.

The third product which showed a strong production increase in the period 1948-1967 was tea, which chiefly took place on the big estates. Not only did they expand the area under cultivation by filling up their empty areas but they also intensified the methods of crop husbandry by proper fertilizer application, improvements in plucking standards and pruning techniques, and even the application of sprinkling irrigation devices during the drier periods of the year. In 1962 the Tanzania government embarked on a smallholder tea programme. Initially, expansion was slow but from 1965 onwards farmers applied in large numbers for the necessary assistance to grow this crop. Potential tea growers were carefully selected based on soil surveys and other criteria. All inputs were made available to the grower. Moreover the low number of growers per extension workers facilitated detailed

expert guidance. The marketing of the crop was organized through the tea growers association, while the manufacturing of green leaf took place in the factories of the estates. Due to this package of inputs made available to the grower, a high standard of crop husbandry was attained, although some negative influence was exercised by absenteeism.¹³

Summarizing, the following factors are responsible for the changes in the economic situation between 1948 and 1967: 1. the relatively favourable price level for coffee in the period 1948-1955, 2. the activities of the Tanzania government in the field of road construction and the supply of agricultural inputs, particularly for coffee and tea, 3. the improvement of the marketing organization, 4. initiative/additional labour input on the part of the local farmers and 5. better management on the part of the tea estates. Increased production does not necessarily go hand in hand with increased money income. And even if farmers attained a higher money income, it does not always result in increased purchasing power. A correction should therefore be made for the prevailing inflation. With only scanty evidence available, we have estimated the annual rate of inflation at about 1 per cent per annum during the period 1948-1960 and 2 per cent as from 1960 onwards¹⁴. Under these circumstances, it appears that with an increase in real money income from 6.3 to 12.0 million shillings (in 1948 prices) the annual average growth of money income over this 19 year period was 3.5 per cent. (Table 4) Thus, economic growth in terms of annual per capita income growth outstripped population growth by about 1 per cent per year on average. A closer scrutiny of the time series, however, discloses that a real income growth from 6.3 million shillings to 14.5 million shillings, took place in the period 1948-1957, which boils down to an annual income increase of nearly 10.0 per cent. Thereafter, a *negative* growth of real income of 2.0 per cent per annum is noticeable for the period 1957-1967. Three factors are responsible for this retrogression:

1. The decline in world market prices for coffee. Whereas coffee production reached 1900 tons in 1963, the total output more or less stagnated thereafter, with some fluctuations from year to year. This stagnation was a direct result of the lower prices paid to farmers, which strongly discouraged them from paying sufficient attention to their plots and which indirectly contributed to another serious problem — pests and diseases which spread rapidly. Prices paid to farmers before taxation were around 3 shillings per lb. in 1956-1957; they dropped to 2 shillings in 1958-1959 and reached a low ebb of 1.20 shilling in 1967-1968. Although the number of growers and the area under the crop increased, total output remained at the same level. Consequently, an increasing number of farmers with a larger area under cultivation produced a constant quantity of coffee of a deteriorating quality.
2. A similar pattern is discernable for paddy; a steadily rising output until the late 1950's, and thereafter a stagnation, albeit for different reasons. In the case of rice, the main factor retarding the production increase, is the lack of water control. This means that improved technology, i.e. methods of cultivation, new inputs, cannot be introduced, since it is not economic to use them as long as drainage facilities in particular are non-existent. At present, the main production constraint is that of labour in the peak period of weeding which limits the acreage cultivated per

farmer. Farmers are not interested to increase their labour input in this period, as they are uncertain about the return. The fields may become flooded again, even shortly before the harvest.

3. The Tanganyika Government's order to stop labour migration to the South African mines. The racial segregation and discrimination in South Africa led in 1963 to the decision of the Tanganyika Government to boycott South Africa. This boycott meant the loss of markets for Tanganyika's exports and it has necessitated the importation of certain goods from more expensive sources. For Rungwe District the most important consequence of the boycott was the halt of labour migration to the South African mines.¹⁵

This decision meant a heavy loss of money income for the Rungwe District. While small numbers may still go to the Copperbelt, the demand for Tanzanian labour has also strongly decreased here. This can be explained by the increase in mechanization and the preference for Zambian citizens. The small number of people migrating nowadays is in no way comparable to the large numbers that left the district in the 1950's and the early 1960's.

5. The hypothetical model: the relative impact of demographic and economic factors

Economic growth is to a large extent a result of changes in the use of production factors, notably through technological changes, which in turn, result in higher levels of productivity. The ability and willingness of producers to undertake these changes are largely determined by the marketing possibilities for the products under consideration. Sometimes there is a tendency to underestimate the impact of this factor in favour of others such as the level of education, the obstacles created by the community and the availability of the necessary inputs. Without denying the relevance and the relative importance of such factors in various situations, they are often outweighed by the importance of good marketing opportunities. The study of the Rungwe coffee industry makes this abundantly clear.

To indicate the relative importance of the various demographic and economic factors on the level of cash income per capita in the Rungwe District, a simple theoretical model can be constructed. To this end we assume hypothetical changes in fertility and mortality rates on the demographic side, resulting in different population growth figures, and changes in the terms of trade and technological improvements on the economic side. The relative importance of the various factors is assessed by means of a forward projection of the indicators. In the construction of the model, we only undertook a linear projection of the variables; mutual dependence of the indicators was not taken into account.

On the demographic side we assume a considerably faster and a considerably slower growth rate between 1948 and 1967 than the one which actually occurred. A downward trend in the mortality rate and a concomitant increase in fertility could have been caused by a spectacular improvement in medical conditions, which in turn resulted in a decrease of sterility and a lower mortality rate of women in the reproductive period. A higher fertility rate could have been influenced further by an increase in monogamous marriages and a higher marriage stability.

In contrast, a considerably lower growth than the actual one could have materialized, although for this lower growth rate a traditional and a modern pattern should be distinguished. The traditional pattern is characterized by a high or an even increasing mortality, and a constant fertility under the conditions of a poor or even deteriorating level of medical care, the outbreaks of epidemics, an increasing sterility and a deterioration of food production. An even lower growth rate is, however, attained under the modern pattern, which may materialize as a result of a relatively strong decrease in mortality and a concomitant decrease in fertility. Factors influencing such a pattern are: a high level of medical facilities, improved food conditions, i.e. a more varied and balanced diet, and a highly successful family planning programme. The table below provides us with the demographic data of these hypothetical situations.

Table 3. *Size of the population in Rungwe District under changed population growth conditions*

Conditions	% annual increase		Total population		Active population (% of total)	
	1948/57	1957/67	1957 +	1967	1957	1967
Higher growth rate	2.5	2.9	278,100	392,300	51	50
Lower growth rate ++	1.7	1.5	254,700	319,600	56	57

+ The 1957 total population figure as given by the census report was adjusted for migration and undercount.

++ One may argue that for African conditions an extremely low growth rate was adopted. Experiences with family planning programmes in Kenya demonstrated that figures in the order of 2.1-2.3 per cent are difficult to attain. The low rate adopted is probably not unrealistic for Tanzania in view of the pronounced development policy. Moreover, a more extreme rate may more clearly reveal the relevance and impact of each factor.

On the economic side, we assume a more favourable situation with regard to coffee prices on the world market and technological improvements in the paddy growing area.

On average the rate of increase of coffee production has been 15 per cent per annum for the period 1948-1957. During the early years, the growth rate was around 20 per cent, tapering off to 10 per cent towards the end of this period. Assuming that the 1957-1958 price of 2.50 shillings per lb. paid to farmers could have been maintained during the period lasting up till 1967 and estimating an annual production growth of at least 6 per cent after 1957 as a result of the favourable price level, total coffee output would have amounted to 2500 tons by 1967. The latter assumption is not unrealistic in view of the 1970-1971 production level of 2400 tons which occurred after a price rise of the previous year. Under these conditions the total money value of cash agriculture would have amounted to 18.3 million shillings in 1967 (in 1948 prices).

In the Lakeshore area the lack of drainage facilities strongly hampers an increase in paddy production. The flood problem is due to the small gradient of the land, the high rainfall in the area during a short period of the year and the fact that rivers crossing the plain frequently overspill their banks. Farming conditions in the area can be improved at relatively low costs by constructing dikes along the rivers

and by changing the local drainage system. Construction costs of these works were estimated to range between 33 and 85 shillings per acre.¹⁶ Assuming that these structures had been built as from 1957 onwards, covering an area of 2000 ha. out of the present rice area of 10 000 ha., we have estimated that yields would have increased from 1000 to 2500 kgs per ha. Taking into account the increased farm costs because of these drainage structures, the total net money income would have risen with 1.2 million shillings by 1967.

In the following table we present on the basis of these three assumptions, the total money income in the district: 1. the actual situation in 1948 and 1967; 2. constant 1957 coffee prices and subsequently higher productions, and 3. coffee prices and production as in assumption 2., and in addition investments in rice cultivation resulting in a higher paddy output. The figures have been corrected for inflation.

Table 4. *Total money income in Rungwe District under changed conditions (in million Tanzanian shillings at 1948 prices)*

	1948	1957	1967
Actual situation not corrected	6.3	15.9	15.5
Actual situation corrected for inflation	6.3	14.5	12.0
Better coffee prices and production	6.3	14.5	18.3
Rice investments and better coffee prices and production	6.3	14.5	19.5

From the table it follows that the actual growth of money income in constant prices has on average been 10.0 per cent over the period 1948-1957, whereas a decrease of 2 per cent per annum occurred in the period 1957-1967. This decrease in money income was mainly due to the halt of migration and the fall in coffee prices. In the case of constant coffee prices at the 1957 level and a somewhat higher production, the annual increase of total money income would have attained 2.5 per cent. With the addition of the rice investments, the percentage would further have risen to 3 per cent.

We are now able to calculate the per capita money income for 1957 and 1967 at constant 1948 prices under the various demographic and economic conditions. Particulars are given in table 5.

Table 5. *Per capita money income in Rungwe District, 1948, 1957 and 1967 under various conditions (in Tanzania shillings, at 1948 constant prices)*

Demographic conditions	1948	1957	1967		
			(1)	(2)	(3)
At high population growth rate	27.1	52.1	30.6	46.6	49.7
At actual population growth rate	27.1	53.4	33.3	50.8	54.2
At low population growth rate	27.1	56.9	37.5	57.3	61.0

(1) actual economic conditions.

(2) coffee improvements.

(3) coffee and paddy improvements.

Under the actual economic conditions, the per capita money incomes would have decreased between 1957 and 1967 with 5.5 per cent per annum under high population growth conditions and with over 4.0 per cent under low population growth conditions. Under the coffee improvement assumption, the per capita money incomes would have decreased with 1.0 per cent in the case of high population growth and increased with less than 0.1 per cent in that of low population growth. If both coffee and paddy improvements would have taken place, the per capita income would have decreased with 0.5 (high population growth) and increased with almost 1.0 per cent (low population growth) respectively.

The relative importance of the economic and demographic factors are shown in table 6, in which the per capita income figures for 1967 under the various conditions are expressed as indices of the 1967 actual population and the actual economic conditions for the same year.

Table 6. *Indices of the 1967 per capita money income under various demographic and economic conditions*

Demographic conditions	Economic conditions - 1967		
	(1)	(2)	(3)
High growth rate	92	140	149
Actual growth rate	100	153	163
Low growth rate	113	172	183

The table clearly demonstrates the importance of stable commodity prices. Under the actual population growth rate a constant 1957 coffee price would have resulted in a 53 per cent increase of per capita money income over the period 1957-1967, whereas technological improvements in paddy add another 10 per cent. The impact of the demographic factor lies in the same order of magnitude as the paddy improvement: a higher population growth rate would result in a decrease of 8 per cent, a lower one in an increase of 13 per cent over the same period. The limited impact of changes in the demographic factor *on the short run* (the period covered in the calculation was 19 years) becomes abundantly clear. In addition, one may conclude that the relative impact of population growth and, consequently, of population planning programmes, is for this case far outweighed by such structural measures as higher and stable prices for the main export products.

The question remains whether the conclusion arrived at here has a wider applicability. The expansion of agricultural production in the Rungwe District occurred under the conditions of a 'land surplus economy',¹⁷ i.e. the factor land was typically in abundance compared with other factors of production such as labour. Under the then existing agricultural system free labour was, however, also available. In other words, the expansion of agricultural production took place at zero opportunity costs for land and labour. Similar processes of growth of agricultural production have been recorded for many other parts of sub-Saharan Africa. In the present situation, all land of relatively good quality is occupied in Rungwe District and further production increases have to take place at the intensive margin. This implies the investment of capital which to a large extent has to be created through

the export of agricultural products. Many African countries find themselves in similar circumstances: the land surplus economy is almost or completely turned into a labour surplus economy and there is a heavy dependence on agricultural exports for capital formation.

It would be rather unrealistic to expect sudden and short term changes in economic conditions in areas like Rungwe District, where the labour surplus situation emerges. It is unlikely that world market prices for most agricultural products will show drastic long-term improvements. This prospect has important consequences for any planning activities. A recent study made clear that an overall increase in money income of 3-4 per cent per annum is extremely hard to achieve.¹⁸ In view of the prevailing low standard of living any birth control programmes would meet very little success. Moreover, experiences over the period 1948-1967 demonstrate that such a programme, even if highly succesful, would have a smaller impact on the per capita income than stable world market prices for the main cash crops and technological improvements in agriculture. Consequently, structural changes in the world economy have more effect than birth control programmes in raising the standard of living.

Notes

¹ World Bank Atlas, 6th edition, New York; figures quoted in Finance and Development, no. 1, 1972, p. 52.

² The Tanzanian Minister of Finance stated in his 1973/74 budget speech that for the first ten years of the country's independence an estimated 2500 million shillings in purchasing power was lost as a result of unfavourable world price changes. Similarly, an estimated 200 million was lost because of increases in import prices. See Africa Research Bulletin, Vol. 10, No. 6, July 1973, p. 2787.

³ See Meilink's contribution to this issue.

⁴ For details on inequality at the village level, see van Hekken, P. and H. U. E. Thoden van Velzen, Land Scarcity and Rural Inequality, Technical Paper Nr. 6, Leyden, April 1970.

⁵ The Tanzania shilling was valued 20 shillings to the £ prior to the 1967 devaluation of the £. The present (1973) exchange rate is 16.7 Tanzania shillings to the £ or 6.89 per \$.

⁶ Ruthenberg, H., Agricultural development in Tanganyika, Berlin, 1964.

⁷ Data were chiefly taken from De Jonge, K. and J. J. Sterkenburg, Evaluation of the 1967 Tanzania Population Census in Rungwe, (Tanzania) Technical Paper Nr. 8, Leyden, 1971. The main conclusions of this report will be included in the series of reports on the Tanzania Population census, Vol. vi, Government Printer, Dar es Salaam (forthcoming). For further demographic details, see De Jonge's contribution in this volume.

⁸ For the rather favourable situation with regard to the medical services in the area, see Luning, H. A. and J. J. Sterkenburg, A Planning Survey of the Rungwe District, Technical Paper Nr. 4, Leyden, January 1970, Ch. 6.

⁹ Gulliver, P. H., A Report on the Migration of African Workers to the South from

the Southern Highlands Province, with special references to the Nyakyusa of Rungwe District, Dar es Salaam, 1955 (mimeo), p. B3.

¹⁰ Leaving aside the cash realized by selling various types of food products at local markets in the district.

¹¹ See Sterkenburg, J. J., Factors determining the growth of the Rungwe coffee industry, Paper presented at a seminar on Changes in Tanzania Rural Society and the relevance for Development Planning, Leyden, December 1970.

¹² Luning, H. A. and J. J. Sterkenburg, A social cost-benefit analysis of road building for agricultural development: a case study from Tanzania, *Journal of Agricultural Economics*, Vol. xxiv, 2, 1973, pp. 311-319.

¹³ See Sterkenburg, J. J. and A. Tempelman. Occupation and absenteeism of tea growers in relation to the quality of the tea plot, Rungwe Agro-Socio-Economic Research Project, Technical Paper Nr. 2, Leyden, October 1969.

¹⁴ Based on: *Surveys of African Economies*, Vol. 2, I. M. F. Washington, 1969, pp. 240-241 and H. Kimble, *Price Control in Tanzania*, East Africa Publishing House, Nairobi, Econ. Research Bureau, Dar es Salaam, 1970, Appendices.

¹⁵ President Nyerere defended this decision and other aspects of his foreign policy in a memorandum for the June 1966 meeting of the National Executive of the ruling party, without mentioning the amount of money involved. Nyerere, J. K., *Principles and Development*, Mbioni, 3(1966/67), 6, pp. 4-33. The text of this memorandum has also been published in Nyerere, Julius, K., *Freedom and Socialism*, o.u.p. 1968 (Chapter 21).

¹⁶ For details, see Luning, H. A. and J. J. Sterkenburg, *An Executive Plan for Agricultural Development in Rungwe District, (1971-'79)*, Vol. I, para 39-44 and Vol. II, Annex G.

¹⁷ Helleiner, G. K., *Typology in Development Theory, The Land Surplus Economy*, Stanford Food Research Institute Studies, 6 (1966), 181-94.

¹⁸ Luning H. A. and J. J. Sterkenburg, *An Executive Plan for Agricultural Development in Rungwe District, (1971-'79)*, 2 vols. Leyden, December 1971.

Pierre Pradervand / The ideological premises of western research in the field of population policy*

‘All knowledge, like all ignorance, tends to be opportune and to advance the cause of special interests — as long as investigators fail to observe the necessity of working with specific and explicit value premises. There is a ‘convenience of ignorance’ which enters into our observations and inferences and tends to fit them into a conception of reality confirming to our interests. Recognition of this fact does not, of course, imply that all our observations and inferences are faulty, but it does mean that we should scrutinize them carefully.’

G. Myrda!

1. *Necessity of an epistemological critique*

Anyone even mildly familiar with western literature in the field of population cannot help but be struck by the extent to which ideology, most often neo-Malthusian,¹ permeates most of the thinking; this usually is covered up by a veneer of scientific language which peels off easily when approached epistemologically. As the introductory quote from Myrdal stresses, this tendency represents a fairly general bias common to almost all knowledge.² These ideological³ biases could be considered as fairly harmless if they did not have serious and far-reaching practical and political implications; for example, the attempt of some western nations and organizations to impose a neo-Malthusian view of the development process on the Third World. In this paper, I will attempt to outline the ‘right’ steps in the scientific approach to a problem, and to illustrate briefly how these steps are generally ignored in the field of population.⁴

2. *Analysis of words and concepts*

Social scientists and demographers frequently use everyday words, giving them a supposedly scientific meaning. Because they rarely bother to analyse the words and concepts they use and too often haphazardly borrow words already laden with numerous connotations, the result is simply to incorporate common prejudices into what is supposed to be a scientific discourse.

An outstanding example of this is the use — even by the most prestigious demographers — of the word population ‘explosion’ to describe recent demographic trends in the Third World. The word is misleading, giving the impression of something sudden, almost accidental, and discourages a careful search for causes. Such a search undertaken would reveal the main cause of this so-called ‘explosion’ to lie in the economic and social distortions imposed upon the developing areas by the colonial powers.⁵ When using this expression, an author even managed to evoke the ghost of some demonic libido rampant in underdeveloped regions, as Robbins does in his book *Too Many Asians* (a revealing title) who writes, ‘At the root of Asia’s problem of population is copulation’ (sic).⁶

* This is a slightly revised version of a paper originally prepared for the African Population Conference, Accra, Ghana, December 9-18, 1971.

More revealing still is the fact that the word 'explosion' is used only to describe the *population* growth of underdeveloped countries, never to describe the huge increase in *consumption* of non-renewable resources of industrialized nations, although there can be no doubt left that, in terms of environmental deterioration and stress on the world's ecosystem, this consumption has exercised much greater strain than the population increase of the Third World.⁷

Another example of this semantic fuzziness is the use of words such as 'conservative' to describe people desiring large families and 'liberal' the others:⁸ the African peasant with two wives and a yearly per capita income of \$ 70, who wishes 8 children is a 'conservative', as opposed to the 'liberal' who wants a smaller family even if he has a higher income and thus consumes more non-renewable resources. Words become meaningless in such a context. Other examples are concepts like 'over' and 'under-' population, optimum population.

3. *Defining 'the problem'*

The very acknowledgement that something constitutes a problem is a value judgement. The definition of a situation or a 'problem' is of the greatest importance because, to a large extent, it already implies the solution which will be applied to it. A growing number of western analysts of the Third World outlines population growth, if not as the major obstacle to development, at least as a very serious one. Most of the time, they are sincerely surprised that one can contest this view — for, as Myrdal so aptly states, 'Ideologies, to those holding them, have always appeared to be simple and indisputable conclusions from obvious facts'.⁹ The fact that quite a few African countries consider population growth as beneficial is overlooked as a momentary aberration which can hopefully be rectified by the proper dosage of western economic wisdom.¹⁰

Rarely are the main difficulties of these countries stressed, i.e. their political structures, the quasi-colonial domination of their economies by the western powers, the institutional infrastructure legated by the prior colonial occupants, factors which are, by any standard, as important, if not more so, than population growth. Why then pinpoint population growth in defining the problem rather than any of these other factors? There is absolutely no scientific basis for this approach. Again quoting Myrdal, who has such a clear vision of the ideological biases of western research:

'. . . biases operate through the selection of strategic factors on which interest is focused and of assumptions about their role in historical processes. This selection of strategic factors and of assumptions about their role remains essentially a priori however much illustrative material is amassed. It never is . . . empirically verified or refuted.'¹¹

Recent history offers some interesting examples of so-called economic 'take-offs' despite population growth rates of 3 per cent or even more (Taiwan, Albania, Outer Mongolia),¹² although the neo-Malthusian school usually 'explains away' the first case as an 'exception' and conveniently ignores the last two. Using the accepted approach of the sociology of knowledge, the reason for this bias has to be looked for in the social and political backgrounds of its proponents, those who

suggest that 'less than five dollars invested in population control is worth a hundred dollars invested in economic growth' to quote the now classical comment made in 1965 by U.S. President Johnson. In their short-run view, it is evidently cheaper and politically more palatable to cut down on the numbers of those born in underdeveloped areas than on their own consumption. This corresponds to the logic of the neo-Malthusian dilemma, as the dean of French demographers, Sauvy, stressed many years ago:

'With 8 per cent of the world's surface and 5.6 per cent of the world's population, they (U.S.A.) consume 50 per cent of the world's production. This consideration leads them if not to consciously slow down the development of the underdeveloped nations, at least to adopt an attitude which goes in this direction . . . In other words, if there is not a rapid increase of the world production of raw materials, accompanied by progress in the use of these materials, the mercantilist policy of the developed nations competes with world population growth. It would only be coherent and logical if, suddenly, the population of the underdeveloped countries was, for instance, reduced by one half.'¹³

Another example, among many, of false definitions leading to biased conclusions can be found in many western economists' evaluations of the 'costs' of family planning: by defining the cost of family planning as the cost of contraceptive services in Taiwan or South Korea, these economists manage to 'sell' family planning as a 'cheap' investment.¹⁴ Despite the obvious fallacy behind their whole approach, they only take into account the 'marketing' of the product, the final cost of clinical services. But in fact, this is very misleading as the lower the level of development of a country, the fewer the number of 'motivated' women and thus the higher the cost of getting family planning adopted. In other words, the costs of promoting the adoption of family planning should in fact be spread over the whole development process.

The theory of the demographic transition is another example of how, behind a façade of scientific serenity, evident biases are operating.¹⁵ In fact it contains no 'theory'; it is simply an attempt to describe a historical evolution. One of its main weaknesses lies in its ahistorical nature: it outlines 3-4 'stages' which supposedly have universal validity. Furthermore, it has a 'technological' bias inasmuch as the main causative factor of the mortality decline in the Third World is attributed to the large-scale use of cheap public health techniques. So what is more natural than to offer a 'technological' solution to what is supposed to be an accident occasioned by technology? In the words of one of the world's foremost family planning experts speaking in 1964 of the I.U.D., 'I do truly believe that this simple device can, and hopefully will, change the history of the world'.¹⁶

It is possible to explain the demographic transition, however, in very different terms from the ahistorical ones outlined above. For instance, it seems clear that the rapid population increase occurred because the colonial powers had completely broken down the social structure of the former colonies, and especially had not, until too late, made any significant attempts at real economic development. They

created the motivation for health care, but did not modernize the countries, which would have created a strong motivation for birth control, as happened in Europe despite the unavailability of contraceptives. The advantage of this last explanation is that it lays the onus for the responsibility of the so-called population 'explosion' where it should really lie — on the ex-colonial powers, not on 'neutral' elements such as D.D.T., etc. This might not seem of overriding importance until one starts calculating the real costs of population control, defined not as the simple marketing of pills and loops but as creating also the whole motivational basis for contraception, in other terms, the costs of real development.

4. *Defining concepts*

Having defined the problem, it is important to define with equal care the concepts one is going to use to approach it. No zoologist would attempt to discuss the characteristics of an animal without situating it carefully in the family, species, etc., to which it belongs, any more than an astronomer would attempt a discourse on a given nebula without situating it on a stellar map, defining its type, etc. Why, then, are social scientists — who by definition operate in a field of fuzzier and changing concepts — not as careful? Having made a careful study of definitions (and worse still, the lack of definitions) used in the field of population policy over the past years, I have been amazed at the semantic anarchy which reigns in this area.¹⁷ Demographers and sociologists of great prestige write on the topic of population policy without defining it; sometimes whole books are written without a precise definition of the term.¹⁸ Definitions are the exception rather than the rule.

Defining a topic carefully forces an author to state his various premises so that the reader is aware of them. This is hardly ever the case of contemporary population literature. Most of the studies in this area have until very recently had a decidedly neo-Malthusian bias, in that the author usually discussed measures aimed at *population control*, generally concentrating on the large scale dissemination of contraception.¹⁹ Intended or unintended — and most writers in this area are so wrapped up in their western value-judgments as to not even be aware of their biases — this has usually resulted in eliminating from the discussion of *population policy*²⁰ the numerous measures related to general development which are certainly the most potent creators of 'contraceptive motivation'. As Glass has pointed out:

Direct programs for spreading the use of birth control are, however, only a small part of the action in which developing societies will require to engage. The largest part will have to consist of planned economic and social development — and development at a considerably higher rate than appears to have been evident so far. This will be needed because, without an improvement in levels of living, birth control programs may well be an empty framework'.²¹

Although this has started changing in the past two years, the tendency is still on using 'development' measures to attain population control, rather than in seeing population measures as one — and only one — aspect of a global development policy.

5. *Elaborating a theory*

Any population policy which wishes to at least attempt basing itself on scientific knowledge implies some understanding of causal relations in the field of fertility and contraception: if we suggest certain measures — e.g. decreasing maternal allowances — it implies that we have some clear evidence that maternal allowances are a booster to fertility. Do we? The sad fact is that there is as yet not even a semblance of agreement among specialists on anything that could pretend to the name of fertility theory.²²

Yet, as Myrdal has stressed:

‘Theory, therefore, must always be a priori to the empirical observations of the facts. Facts come to mean something only as ascertained and organized in the frame of a theory. Indeed, facts as part of scientific knowledge have no existence outside such a frame. Questions must be asked before answers can be obtained and, in order to make sense, the questions must be part of a logically co-ordinated attempt to understand social reality as a whole. A non-theoretical approach is, in strict logic, unthinkable.

Underlying and steering every systematic attempt to find out the truth about society, there is therefore always a theory: a vision of what the essential facts and the causal relations between them are. This theory which determines the direction of research should always be made explicit. The danger of keeping the theory implicit — as unstated reasons for asking the particular questions that are asked, and of organizing the findings in the way they are organized — is, of course, that it escapes criticism’.²³

In other words, one is working in this area on the basis of ‘implicit theory’, hunches, intuition, incomplete knowledge — which inevitably come to reflect national or class biases, ethnocentric views of the world and other viewpoints of dubious scientific value. The habit of ‘implicit theory’ is the reason why the field of population policy measures is such a *potpourri* of ideas, from the nuttiest (like pouring sterilizing agents into the drinking water of these all-too-prolific people of the Third World) to the most reasonable.²⁴ Not only must we conclude that there can be no ‘scientific population policies’ — the expression is a contradiction in terms — but we must humbly acknowledge that we are operating on the basis of biased and insufficient data, making guesses in the dark which we can never check because the subject matter of our study is continually changing.

We may put our inadequate data into computers and, with the aid of esoteric formulas, bring out ‘impressive’ tables, much in the manner of a game, but let us not deceive ourselves: ultimately even a ‘scientific’ approach is a ‘biased’ approach — in a very fundamental sense. For it studies, on the basis of material observation, what was or is, and then deducts from that what could possibly be, given certain circumstances. It might be altogether better to start from an openly normative standpoint: here is what we *should* attain, let us begin *educating* people on *how* to attain this end. This has been the Chinese approach, and from the most recent in-

formation, it would seem that this country — which only a few decades ago or less was described in almost hopeless terms by the neo-Malthusians²⁵ — is in the process of becoming the first large country of the Third World to have started decisively lowering its birth rate.²⁶ If this is really so — and I believe it is — then the implications for population policy are tremendous especially as the birth control programs in India and Pakistan, after years of effort, have failed to make any significant impact on the birth rate in the respective countries.

6. *Methodological premises*

Methodology can be divided into two categories:

a. *The basic methodological approach*: by this I mean the type of viewpoint used with respect to the problem. In general, research in the field of family planning — which dominates the whole field of population policy — tends to be demographically oriented, technological, non-institutional and ahistorical. This approach is admirably suited for side-stepping some of the most crucial issues in the area of underdevelopment, especially problems of social structure, distribution of wealth and power, and change. By concentrating on nice theories about ‘machismo’ and ‘husband-wife communication’, one sidesteps the issues of the historical development of machismo in e.g. a male-oriented, feudal-capitalist society. The methodology predetermines the results, and it is not surprising that talented researchers conclude that husband-wife communication, (rather than political change, economic development, etc) is *the* key to contraceptive adoption: given the basic methodology, they could hardly have arrived at very different results.²⁷

The most striking aspect of this approach is its evident politically conservative bias. This bias is clearly seen in the whole area of ‘communications’ research so often aimed at convincing people to adopt family planning by generous dosages of propaganda and contraceptive information. Thus a study of very low-income inhabitants living in the worst type of urban slum characterized by extremely high infant mortality, high unemployment, quasi inexistent sanitation, etc. aimed at defining how to get them to adopt contraception without any change in their environmental conditions.²⁸

b. *Technical procedures*: if anything appears immune to value biases, it is the technical procedures used in social science. KAP surveys (Knowledge, Attitude and Practice of family planning) are one evidence of the contrary, i.e. how an apparently ‘neutral’ technique can disguise a whole ideology. These surveys, based on ethnocentric, western, polling techniques have, according to one of their main promoters, a clear market orientation. Thus Stycos, a pioneer in the field of KAP surveys has candidly acknowledged that ‘the most important function of such surveys is similar to any market research project: to demonstrate the existence of a demand for goods and services, in this case for birth control’.²⁹ One cannot help but question whether such an attitude is really conducive to serious scientific research. Yet, there is probably no field of the social sciences today where similar methods have been used on such a broad cross-cultural scale. It is also my opinion that the *attitudinal* aspect of these surveys represents, from a methodological point of view, exceptionally poor research, and a growing number of specialists have over recent years expressed their skepticism concerning the validity of many

of these surveys. Poorly-trained interviewers are sent to question rapidly and in a totally artificial setting illiterate women on problems they have never heard about before. The questionnaires are often written by foreign experts who know little of the local culture, do not speak the local languages or dialects, and have often lived only a few weeks in the country. The results of such surveys tend to become self-fulfilling prophesies, and they nearly all show, in varying degrees, that the people interviewed have favourable opinions toward family planning. Their use (one should almost write 'abuse') in Africa has led to rather astonishing conclusions on the high numbers of African women 'interested in family planning'. *In Africa, hardly any of these surveys has even broached the problem of infertility.* Yet, any person with medical experience in Africa knows that many women are preoccupied with the problem of sterility and subfertility rather than with having less children. By simply omitting this last topic, the KAP surveys thus convey a very biased picture of the real fertility aspirations of African women.

The questionable scientific validity of this kind of survey does not seem to disturb many people, and a knowledgeable observer, after criticizing them for this very reason, openly admitted what most people who have worked in this field already know; i.e., that these surveys, apart from their scientific aspect, are used as instruments of political pressure. '... KAP survey results, *erroneous or not*, have helped to persuade prime ministers, parliaments, and the general population to move in a desirable direction and have provided family planning program administrators with justification for budget and programs'.³⁰

7. Conclusions

All policy suggestions are by definition 'biased' in as much as they represent value judgements on a particular situation, and population policy is no exception to this. What is more preoccupying though is that, by what is evidently no accidental occurrence, the biases we have outlined above tend all to concur in the same direction: population policy is more often than not defined as population control; the favorite means of population control is birth control (euphemistically termed 'family planning' most of the time, even when there is little or no emphasis on the family); obstacles to the adoption of contraception are located mainly on the technological level; until recently following a now well-known litany, higher adoption rates were defined as being essentially a question of better administration, more research, greater emphasis on communications and, above all, the 'ideal contraceptive'.

These efforts are, no doubt, also needed, but to lay such emphasis on these and so little on the structural changes indispensable to accelerate the development of a strong contraceptive motivation; never even to allude to the trade relations between rich and poor nations by which the rich give a little with one hand and take back a lot with the other; to make 'population control' the absolute precondition of economic development,³¹ when it is painfully evident that population control will do little or no good to countries with corrupt or reactionary political systems, or in a situation of neocolonial domination, or with such high levels of mortality and such minimal levels of modernization that people will not want to adopt birth control; to suggest all these things is at best an acute case of myopia, but more

often a form of bad faith. In the long run, this goes against the best interests both of the industrialized and underdeveloped nations, and is already creating a backlash against family planning and/or population control in some nations. For, as Professor Okediji said:

‘The developed nations must re-examine their economic and ideological policies which also contribute to the underdevelopment of the nations of the Third World. Their enthusiasm in financing and organizing family planning clinics in most of the nations of the Third World will be misconstrued as a political gimmick to control the population of the latter, unless they (the rich nations) liberalize their economic arrangements with the developing countries’.³²

There are so many excellent and evident ‘humanitarian’ reasons to adopt family planning that it baffles me that even distinguished social scientists have to go through considerable intellectual gymnastics to try and press the idea of population control on unwilling nations of the Third World. This will not advance their cause one iota, and probably will retard it considerably. My feeling is that ‘population control’ in tropical Africa will not succeed on a large scale until a considerably higher level of development has been attained. Instead of clamoring loudly for a more rapid adoption of birth control in underdeveloped countries, the rich nations — which include the eastern bloc — should take really significant measures towards boosting the economic and social development of these areas. This would be the most important contribution to the creation of the contraceptive motivation necessary for the adoption of family planning and, in a long term perspective, the most valuable means of ‘population control’ conceivable today. Of course — and this should almost go without saying — these attempts to boost development are entirely justified as an end in itself and should never be rationalized in terms of their probable impact on fertility.

Notes

¹ I take the word neo-Malthusian in a broad sense, i.e. implying that population growth is the main or an essential obstacle to economic and social development. See illustrations under para. 4 below.

² For a broader perspective on this issue, see the introduction to *Asian Drama* by the same author, Pantheon, N.Y., 1968, and also P. Streeten, edit., *Value in Social Theory*, Routledge, London, 1958.

³ I am taking ‘ideological’ in the sense of representing the vested interests of one group or a specific ‘Weltanschauung’ (world view). Even the scientific approach can become an ideology, but most of the time it is simply characterized by epistemological bias (an inevitable component of its materialistic basis).

⁴ My definition of these steps owes a great deal to the excellent book by P. Bourdieu et al, *Le Métier de Sociologue*, Mouton, Bordas, Paris, 1968, one of the most compelling studies stressing the necessity for a radical epistemological critique in the social

sciences. I plan to publish a more extensive and more thoroughly documented study of this problem in a book on population policies in Africa (forthcoming).

⁵ I have illustrated this point in a recent book, *Introduction au Planning Familial et à la Limitation des Naissances dans le Tiers Monde*, Montreal; 1971.

⁶ J. Robbins, *Too Many Asians*, Doubleday, New York, 1959, p. 173.

⁷ See Gunnar Adler-Karissou 'The mote and the beam, population explosion and the explosion of living standards,' in *Family Planning in Ethiopia*, no. 1, 1972, and Pierre Pradervand, 'Les pays nantis et la limitation des naissances dans le Tiers Monde' *Developpement et Civilisations*, no. 39-40, mars-juin 1970, pp. 4-40.

⁸ c.f. D. I. Pool, 'The attitude of urban males towards family size and family limitation', *Studies in Family Planning*, No. 60, Dec. 1970, p. 12-17. The use of quotation marks by the author does not excuse the intrusion of such politically biased terms into what is meant to be an 'objective' description.

⁹ G. Myrdal, *Asian Drama*, *op. cit.*, vol. 2, p. 973.

¹⁰ Gabon and Ivory Coast are examples of such countries.

¹¹ G. Myrdal, *op. cit.*, vol. 3, p. 1847.

¹² See for instance W. Petersen, 'Taiwan's Population Problem', in S. Chandrasekhar, *Asia's Population Problems*, Praeger, N.Y. 1967; G. Bès, 'La République de Mongolie: une renaissance économique sur un bouclier stratégique,' *Tiers Monde* 11(44), Oct.-Dec. 1970, pp. 815-32; M. Sivignon, 'Quelques données démographiques sur la République Populaire d'Albanie,' *Revue de Géographie de Lyon*, 45(1), 1970, pp. 61-74 and A. Baba Miské, 'L'expérience albanaise – un exemple pour le Tiers Monde,' *Africasia*, No. 21, Aug. 3-30, 1970.

¹³ A. Sauvy, *Théorie Générale de la Population*, P.U.F., Paris, 1954, Vol. 2, p. 216, (my translation). The original figures quoted by Sauvy in 1954 were 9.5 and 60 per cent. I have corrected them for obvious reasons.

¹⁴ The references are innumerable. S. Enke, 'Birth control for economic development,' *Science*, 164, May 16, 1969, pp. 798-802, and chap. 8 in F. Ohlin, *Régulation Démographique et Croissance Économiques*, OECD, Paris, 1967, are classical examples.

¹⁵ In the process that demographers call 'the demographic transition', death rates are lowered through conquest of disease, and the fertility rates are readjusted by lowering them in order to avoid runaway population growth. The classic theory is as follows. The first stage is one of high birth and death rates; because the birth rate is approximately equal to the death rate, the natural increase in population is very low. In the second stage, there is a high rate of population growth caused by a decline in the death rate (as a result of improved medical technology, which is proceeding at a much faster pace than a decline in the birth rate). In the third stage, the population growth rate is positive but of lesser magnitude than in the second stage; in this third stage, the birth rate declines faster than the death rate. In the final stage, population growth is small or negative, since a low birth-rate approximates the low death rate.

¹⁶ B. Berelson, 'Application of intra-uterine contraception in family planning programs,' *2nd International Conference on Intra-Uterine Contraception*, N.Y., 1964. In all fairness to Dr. Berelson it is important to stress that his position has since then changed immensely and can no more be described as neo-malthusian.

¹⁷ See Garrett Harding, *Population, Evolution and Birth Control, a Collage of Controversial Readings*, 1964 and my doctoral dissertation 'Les Politiques de population en

Afrique francophone de l'ouest, obstacles et possibilités, II Vols, Université de Paris, année universitaire 1972-1973, chap. II, vol. I.

¹⁸ See e.g., W. D. Borrie, *Population Trends and Policies*, Australasian Publishing House, Sydney, 1948; R. M. Titmuss and B. Abel-Smith, *Social Policies and Population Growth in Mauritius*, Methuen, London, 1961; G. Ohlin, *op. cit.*

¹⁹ *Population control*: the systematic utilization of contraceptive means on a large scale, including abortion, aimed at decreasing the rate of population growth. Birth control activities are mostly organized by governments.

²⁰ *Population policy*: all measures taken by a government with the intention to influence the size, structure and distribution of the population (from birth control to measures in the field of education or women's emancipation).

²¹ D. V. Glass, 'Population Growth and Population Policy', in M. Sheps and J. C. Ridley, eds., *Public Health and Population Change*, University of Pittsburgh Press, Pittsburgh, 1965, p. 23. In my opinion, the best definition is that given by H. T. El-dridge in the *International Encyclopedia of the Social Sciences*, vol. 12, p. 381.

²² c.f. the review of the field by G. Hawthorn. *The Sociology of Fertility*, Collier-Macmillan, London, 1970.

²³ G. Myrdal, 'The logical crux of all science', in P. Streeten, ed., *op. cit.*

²⁴ For an excellent study of the whole field, see the now classical essay by B. Berelson, 'Beyond Family Planning', *Studies in Family Planning*, 38, February 1969.

²⁵ c.f. 'Problems of Overpopulation', vol II of M. Sanger, ed. *VIth International and Neomalthusian Birth Control Conference*, New York, 1926.

²⁶ c.f. P. C. Chen, China's Birth Control Action Program 1956-64, *Population Studies*, 24(2), July 1970; by the same author 'China's Population Program at the Grass Roots Level': *Studies in Family Planning*, 4(8) Aug. 1973, pp. 219-227; T. Katagiri, 'A Report on the Family Planning Program in the People's Republic of China' *ibid.*, pp. 216-218; H. Suyin, Family Planning in China, *Japan Quarterly*, 17(4), 1970, pp. 433-42. J. Salaff, The institutional motivation for fertility control in the People's Republic of China, (MS.: 24 March 1971), etc. and personal sources. C. Djerassi, 'In China, family planning affects 90 percent of the urban population' *Ceres* (FAO review) Special population issue, Nov.-Dec. 1973, p. 21-23 and numerous recent studies on this topic.

²⁷ c.f. R. H. Hill et. al., *The Family and Population Control*, University of North Carolina Press, Chapel Hill, 1959. My basic premise is that population is a dependent variable, i.e. mainly the result of a certain socio-economic and cultural organization, not an independent one as the Neo-Malthusians contend; and that only a holistic view of the population problem which encompasses the whole development process offers an adequate approach to the problem of population planning; but differs radically from the birth controllers' view as to the means in attaining it.

²⁸ J. M. Stycos and P. G. Marden. *An Assessment of Fertility and an Evaluation of Health and Family Planning Programs in Las Crusitas, Tegucigalpa*, U.S.A.I.D., Tegucigalpa, 103 p. Extracts appeared in *Studies in Family Planning*, 57, Sept. 1970, pp. 20-24.

²⁹ J. Stycos, 'Survey Research and Population Control in Latin America', in B. Berelson et. al. Sample Surveys and Population Control, *Public Opinion Quarterly*, 28, Fall 1964, p. 368.

³⁰ P. M. Hauser, 'Family Planning and Population Programs: a book review article,' *Demography*, 4(1), 1967, p. 405, (underscoring mine).

³¹ c.f. 'Population growth is the greatest obstacle to economic growth in much of the underdeveloped world,' *Congressional Record*, vol. 112, Oct. 25, 1966, p. 184. The literature on population is studded with innumerable similar quotations.

³² F. Okediji, at an IPPF Conference on family planning education in Africa held in Accra, Fall 1970, as quoted in *West Africa*, Dec. 26, 1970 – Jan. 1, 1971 in article 'Birth Control Aid for Africa.' The author is acting head of the Department of Sociology, University of Ibadan, and well-known for his research in the area of fertility.

Klaas de Jonge/ Fertility: a dependent variable A case study of a rural area in Tanzania*

1. Introduction

Tanzania has a high population growth rate, i.e. 2.7 per cent. The country as a whole is not densely populated (14 pers/km²); two-thirds of Tanzania's rural population is, however, concentrated in a relatively small area where climate and soil are highly favourable for agriculture. In this paper, we will examine fertility in such an area, Rungwe, where, in view of the quality of the soil and the present cultivation techniques, population pressure is relatively high.

Most of the inhabitants of Rungwe district, located in the southern highlands of Tanzania, are Nyakyusa: seventy per cent of the total population. They live predominantly in the eastern part of the district. Rungwe district contains many soil types and great fluctuations both in rainfall and in altitude, a heterogeneity of environments which accounts for a variety of crops: rice, tea, coffee, pyrethrum and assorted food products.

The Arab slave trade bypassed Rungwe and also the colonialist expansion caused no depopulation as it did in many African regions. Initially, Germany colonized the area. In 1891 Protestant Missions established chapters among the Nyakyusa. A few planters arrived in their wake. The Germans introduced money and taxes, used forced labour, and, in 1896, induced the population to grow rice. The British, who assumed control of Tanganyika in 1919, departed in a few respects from the policy of their predecessors. Under their administration, in the 1930's, extensive production of tea and coffee, still leading cash crops today, began.

Missionaries established schools and had converted by 1968, approximately 28 per cent of the population. The British administration supervised the improvement of roads and together with the missions instituted health services.

Population growth resulted in increased competition for good quality land and more intensive cultivation. It became very common for the young men to go away to work.

By the end of the 1920's, but particularly throughout the 1930's, labour migration to the Lupa goldfields in South Tanzania affected the economy of Rungwe to some extent. During World War II a number of men joined the armed forces. After 1945 many young men sought work in the gold mines of South Africa and

* This contribution formed a part of a paper written together with *Corlien Varkevisser*: Fertility in two rural areas of Tanzania: a dependent variable; mimeo Afrika-Studiecentrum, Leiden, December 1972. For Miss Varkevisser's contribution on the Sukuma of Tanzania, see her forthcoming Ph.D.-dissertation published by the Centre for the Study of Education in Changing Societies, Amsterdam. In 1968 the author conducted, as a member of a research team of the Afrika-Studiecentrum, a demographic depth study in Rungwe, investigating a total of 496 households (2483 persons). When comparing the data from this small sample with the results of the 1967 Census, this data appeared to provide a reliable basis for more extensive generalization (see note 3).

in mines throughout the Copperbelt. By the beginning of the 1950's, the economic position of Rungwe's population seemed to improve, partly because the men who had left to work abroad returned with considerable savings and partly because of the expansion of cash crops, accomplished without sizable investment in agriculture.

By the end of the 1950's, the economic situation in Rungwe deteriorated, as a result of declining prices of cash crops on the world market (coffee etc.) (1).

Tanzania gained independence in 1961. Migration in search of jobs to South Africa was shortly thereafter prohibited, which aggravated the economic situation in Rungwe.

Recently the government has sought to transform the economy through implementation of a new economic policy expressed in the Arusha Declaration. The party and the administration penetrated into outlying settlements and have concerned themselves with the creation of an apparatus for socialist mobilization of the peasant masses. Yet the introduction of communal forms of agriculture (*Ujamaa* projects) has met resistance in this densely populated district with its history of cash crops based mostly on individually owned land (2).

2. *General demographic characteristics* (3)

Population density in 1967 was approximately 80 pers/km², but although relatively high, the relation between resources and population seems to be balanced (4).

We estimated the natural increase over the ten year period 1957-67 at 2.3 per cent/year, whereas the emigration of men in the 1950's led to the generally observed population growth of 2.7 per cent. Women in Rungwe at the age of fifty have given birth on average to 6.7 children (born alive).

Mortality is still quite high. Average life expectancy is 37-39 years. Infants die at a rate of 165/1000. We have calculated that approximately 30 per cent of local children die before they reach the age of five. A gradual decline in infant mortality in Rungwe has been insufficient to ensure parents, who regularly experience the sudden death of children, that they will have at least one son left in their old age when they have to rely mainly on their children for support.

To be reasonably certain (80%) of the survival of one son when the father is 65 years of age, a couple must bring seven children into the world (5). It is hardly controversial to assert that no reduction of fertility is foreseeable before spectacular improvements of health services occur. Despite a relatively high incidence of hospitals in the densely populated areas, there is a critical shortage of rural health centres practising preventive health services (6). Moreover, an alarming proportion of dispensaries is in a deplorable condition. The District Medical Officer himself described facilities as ramshackle. Centres frequently lack sufficient medical supplies and sometimes even qualified staff. In addition, wealthy peasants occasionally appear to receive preferential treatment at dispensaries, or they have easier access to resources which the government makes available for the whole of the rural population (7).

3. *Fertility and cultural norms*

3.1. *Attitudes towards offspring.* The average number of children per woman in Rungwe is 6.7, a high figure even among those other areas of East Africa with rapid population growth. Closer spacing of births and progress in combating mortality during the years 1920-1950 probably led to an increase of fertility. Since 1950, however, as far as we were able to observe, fertility has remained rather constant. The Wilsons, who did research in Rungwe in the 1930's, reported: '... children are greatly desired by both men and women. They are desired for themselves and also because they bring parents wealth and prestige; a boy will one day work in the fields of his father and mother, a girl will bring in cattle from her marriage. And the possession of children brings compliments and respect both to men and women (8)'.

A man still desires children in order to enhance his prestige but he may not regard them today any longer as harbingers of wealth. In Rungwe where farming primarily depends upon family labour, the contribution of youngsters is less than that of wives, but remains important during seasonal peaks when the demand for labour is high. Among the Nyakyusa a polygamous man enjoys a superior social and economic position. Most farmers cannot afford to hire labour. Indeed, the government has discouraged the use of help to plant or to harvest a man's full acreage since this practice clashes with the principles of its agricultural development policy (9).

Although children remain a potential asset in the agrarian economy, a large family nowadays also has its drawbacks. Most land in Rungwe today consists of small holdings; parents must divide their already modest property still further among their sons. Men whom we interviewed often told us: 'At present it is difficult to raise your children, dress them and pay their school fees'. Nevertheless, even in parts of Rungwe with the greatest population density and land shortage, the positive aspects of a large family appear to override the negative ones. All women and men interviewed, said they wanted 4 or more children.¹

Disparities in education and socio-economic status among the rural population have thus far produced little divergence in attitudes towards reproduction. Religious differences, however, were of some importance in colouring responses.

3.2 *Measures to reduce fertility.* Although women stated a preference for many children and in fact bore many, it would be wrong to suppose no one took measures² to reduce fertility. The Nyakyusa resort to abstinence, coitus interruptus and prolonged lactation in order to reduce pregnancies. Less commonly, abortifacients, contraceptive mixtures and magical charms are used.

a. *Prolonged lactation.* Prolonged lactation effects ovulation and menstruation after childbirth. In 1968, Nyakyusa mothers weaned their infants on the average by the end of the child's second year. According to data collected in a small part of the district with more than average fertility, the range of postpartum amenorrhoea varies from 12 to 18 months. This confirms recent findings that the lengths of the postpartum anovulatory period is over one year when breastfeeding has approached a two year limit (11). In the 1930's, the Wilsons observed a weaning age of not less than two years, more regularly three years.

b. *Anti-natal practices.* A woman breastfeeding a child defies the accepted norms, if she conceives again before she has weaned her baby. In the 1930's, men were expected to refrain from sexual intercourse until their youngest child was 6-8 months old and then, in order to reduce the likelihood of a new pregnancy, to practise coitus interruptus or to have intercourse infrequently. According to Godfrey Wilson (12), men behaved as prescribed by these taboos which, in combination with prolonged lactation, resulted in wide spacing of births. Formerly, if we accept Monica Wilson's information, four years was a standard interval (13).

Anyone who made more excessive sexual demands on his wife after she had delivered a child endangered her health and the health of the baby by exacerbating spirits.

In 1968, lip service was freely rendered to these forms of conduct but practice was inconsistent with theory. No less than 58 per cent of a small group of male informants stated they had intercourse with their wives within three months of the birth of a child; 87 per cent within half a year (14). Almost every man claimed to abide by the rules of coitus interruptus. Yet, no one expressed satisfaction with the practice of coitus interruptus and most had abandoned it by the time their baby was almost ready to be weaned. Some resorted to native medicines to prevent conception. In the 1950's, Monica Wilson had noted that pregnancies occurred in more rapid succession than previously (15). We found the average time gap between births had shrunk to 3.2 years (2.6 years in the village where post partum data was collected). Older women expressed a desire for a longer breathing space between pregnancies than younger women. In confirmation of public opinion, we discovered that traditional procedures to achieve spacing of children were best observed in polygamous households, least observed by monogamous Christians. In the 1930's the Wilson's (16) recorded additional taboos which no longer exist nowadays: it was forbidden (1) for a woman to bear children after the marriage of her son and (2) a woman should not risk conceiving a child from the time of her daughter's puberty until her daughter has first conceived. If a mother 'overstepped' her daughter in this way it was thought that the girl would remain barren. The first taboo probably had a negligible effect on fertility because at the time of her eldest son's marriage a mother was likely to be more than forty years old; the second one could have reduced fertility.

c. *Involuntary abstinence: absence of spouse because of labour migration.* In Rungwe, especially throughout the 1950's, labour migration (17), was primarily a young man's affair. However, even the temporary separation of man and wife was unlikely to reduce fertility: husbands parted once their wife had become pregnant, returning before their new child was weaned. A woman left behind for an extended period of time had no difficulty obtaining a divorce; she either remarried, or she indulged in extra-marital relations.

Indirectly labour migration might have had a negative impact on fertility, since it undoubtedly contributed to a higher incidence of adulterous behaviour and consequently increased divorce and even sterility caused by gonorrhoea.

4. *The Nyakyusa Marital Pattern.*

In the face of numerous small social and economic changes, the marital pattern

in Rungwe District has remained intact for generations. Among the Nyakyusa (1) marriage is practically universal. Almost everyone marries (2). Women marry first at an early age (3). There is a high incidence of polygamy (4). Marriage is, to a high degree, no permanent proposition.

4.1 *The universal character of marriage.* A mere 2 per cent of Nyakyusa males and a negligible percentage of females of 45 years or older never marry. It is all but unheard of for someone more than 45 years old to marry for the first time.

Table 1. *Marital status for Nyakyusa by age groups and sex (in per cent) 1968*

	Sex	Never married	Married	Widowed + divorced	Total
20-44	males	25	71	4	100
	females	2	95	3	100
45 and over	males	1	95	4	100
	females	-	66	34	100

The proportion of never-married persons rapidly decreased with advancing age. The Nyakyusa regard a marriage as valid only when the bride's father has accepted his future son-in-law and has received a portion of the brideprice agreed upon, and when the bride and groom have had sexual intercourse (18). Should the bride's father disapprove or fail to receive any brideprice, the union is unlawful and both partners are liable to severe negative sanctions. Until marriage has been consummated, the relation remains merely an engagement. In adherence to customary norms, all married persons should have children and should begin having children 2-3 years after their wedding. Illegitimacy remains rare today, although less rare than it once was among the Nyakyusa.

4.2. *Age at marriage.* Men usually marry at a later age than women. For men and woman who married since 1960, we arrived at an average age, at the time of their first marriage, of 28.2 years for the men and 16.9 years for the women. (v. table 2).

Table 2. *The mean age at first marriage by marriage cohort and sex (1968)*

Marriage cohort	Males	Females	Difference in years
1920-29	24.7	15.1	9.6
1930-39	27.6	15.2	12.4
1940-49	27.9	15.8	12.1
1950-59	28.0	16.1	11.9
1960-68	28.2	16.9	11.3
all	27.7	15.9	11.8

A man marrying for the first time generally selects a young girl as his wife (in 93 per cent of the observed first marriages), not a divorced or widowed woman. Women who remarry predominantly take husbands who already have a wife (in 82 per cent observed remarriages). A few women who had been to school for five

years or longer did not marry before they were 19 years old. Table 2, however, reveals how remarkable little variation has occurred in marrying ages during the last half century.

4.3. *Polygamy.* Polygamy continues as the ideal of most non-Christian Nyakyusa males, although *Konter* (19) has demonstrated that attitudes towards polygamy are changing. In 1968, our research pointed at an incidence of polygamy of 27 per cent (i.e. percentage of polygynists among married males). The intensity of polygamy was 2.4 per cent (the average number of wives belonging to a polygamous man). Finally, the general index was 1.38 (The number of married women per married man).

Table 3. *Number of wives per husband*

Tribe country	Year	General index	Intensity of polygamy	Percentage of married males with:			
				1 wife	2 wives	3 wives	4 wives more
Nyakyusa	1968	1.38	2.41	73	19	5	3
Tanganyika *	1957	1.25	–	79	17	3	1
Ghana +	1960	1.4	–	74	20	4	2

* Demographic Handbook for Africa, E.C.A. (table 19) 1968.

Given the universal marriage pattern among the Nyakyusa, the major factor promoting polygamy is the difference in age at first marriage between men and women. Assuming the sex ratios for men and women are equal at each age, it appears that as a result of the fact that men are on the average more than ten years older than the women they marry, the number of married women/married man would be 1.24 (20). The difference between this figure, 1.24, and the general index, 1.38, must be attributed to the unequal sex ratios per various age categories. The emigration of young married men does indeed produce an alteration in the sex ratios. The young men who depart from Rungwe leave more women available for those who remain behind. As could be expected, the percentage of polygamous men and women increases as their age increases. In a polygamous family, each wife and her children constitute a distinct unit: each woman has her own hut where she eats with her children. With the exception of a first wife's ritual function, in principle all wives of the same husband share equal prerogatives. Their husband must divide his time among them fairly. In practice he often plays favourites, which explains why internal conflicts are not rare happenings (21). Knowledge of the intensity of polygamy is of importance for acquiring a better insight into fertility and economic security. We have noticed that women in a polygamous household give birth on the average to fewer children than women in a monogamous household (see below). Moreover, in Rungwe where farming depends primarily on family labour, a polygamous man enjoys better economic prospects than a monogamous man.

4.4. *Marriage as a non-permanent proposition.* Few marriages last for a long period among the Nyakyusa which must primarily be attributed to the age gap at

first marriage between men and women and the limited life expectancies. We calculated 11 years as the average difference in age at a first marriage, the figure is frequently much higher when a man or a woman remarries. It appears that barring divorce and at the mortality level we calculated, the chance that a woman marries only once before her fiftieth year amounts to less than 55 per cent.

Women less than forty-five years old when their husband dies 'remarry' quickly (see table 1); less than 3 per cent of women between the ages of 20 and 44 are widows.

The Nyakyusa are familiar with an institution known as 'levirate'. Levirate entails the inheritance of a man's widow by his heir. Although the Nyakyusa consider the relation of inherited widow and heir as a continuation of the former marriage, we considered it a new marriage, for the statistical consistency of our survey. Should a widow reject her deceased husband's heir and return to live with her family the community looks upon the event as a quasi-divorce. Unlike conditions which apply when a woman seeks divorce while her husband is still alive, an inherited-widow is only obliged to return the brideprice her husband gave when they married if she remarries someone other than his heir.

Divorce in Rungwe is frequent. On the basis of the marital histories of men and women in villages where we did research, we computed three categories of divorce ratios.

The divorce ratios for men were higher than those for women, because women more often survived their partners than men did. A comparison with other African peoples reveals the relatively high divorce ratio of the Nyakyusa (see table 4).

Table 4. *Divorce Ratios * for some African peoples (22) by mode of descent*

People	Ratio A	Ratio B	Ratio C	Mode of Descent
Shona	9.4	32.6	11.3	Patrilineal
Tonga (Gw)	19.3	42.0	26.3	Matrilineal
Ganda	24.3	68.0	27.4	Patrilineal
Mwambwe	19.8	40.8	27.9	Patrilineal
Sukuma	26.1	60.8	30.7	Patrilineal
<i>Nyakyusa</i>	25.4	58.7	31.0	Patrilineal
Yao	30.7	70.1	35.3	Matrilineal
Ngoni	28.5	55.8	36.9	Omnilateral
Tonga (P1)	29.8	57.1	28.4	Matrilineal
Herero	29.5	53.1	39.8	Double unilineal
Lamba	33.1	61.3	41.8	Matrilineal
Lubale	39.0	70.0	45.0	Matrilineal
Ndembu	52.7	80.1	61.4	Matrilineal

* *Divorce Ratios* (:)

A. Marriages ended in divorce \times 100: all marriages

B. Marriages ended in divorce \times 100: all marriages complete by death or divorce

C. Marriages ended in divorce \times 100: all marriages except those that have ended by death

Only in a patrilineal society, a woman, who divorces, loses all legal rights to her children. This fact is the standard explanation for relatively low divorce ratios in patrilineal societies. In Rungwe, despite patrilineality, women initiate 70 per cent of all divorce proceedings. A woman usually does not act, however, until she has

found a new marriage partner who will arrange for the return of the brideprice to the father of her soon-to-be-estranged husband. Figures compiled on the % of the population 'divorced' (cf. table 1) distort the truth about the high incidence of divorce. In five villages where we conducted interviews, we found that out of 100 marriages contracted, 50 would terminate in divorce within forty years. Or, ignoring mortality, more than 60 per cent of all Nyakyusa marriages would break up as a result of intrinsic disharmony. The highest percentage of divorce occurs during the first three years of marriage, before there are any, or at the most, only few children. We found that 43 per cent of all divorces took place within this period. One reason that so many marriages are so short-lived is that disputes over brideprices which frequently lead to a divorce usually occur during the first years of marriage.

5. *The marital pattern and fertility.*

The high observed fertility in Rungwe, a total fertility of 6.7, is a function of the following factors:

- 1 the young age at first marriage,
- 2 the universal character of marriage,
- 3 the short interval before remarrying after death of a marriage partner or divorce,
- 4 the absence of any modern contraceptive techniques and
- 5 the desire for many children by both men and women. We observed, however, a variation in fertility³ according to the type of marital union (monogamous/polygamous) and to the number of marriages (see table 5).

Table 5. *The average of children born alive of women at 45 years and over by type of union and number of times married*

<i>married women</i> by number of wives of husband:				
	<i>1 wife</i>	<i>2 wives</i>	<i>2 or more wives</i>	<i>3 or more wives</i>
Average number of children	7.5	7.2	6.1	5.2
<i>women ever married</i> by number of times married:				
	<i>1 time</i>	<i>2 times</i>	<i>2 or more times</i>	<i>3 or more times</i>
Average number of children	7.4	5.9	5.3	3.8

This table shows that women in polygamous households who have been married several times bear a lower number of children compared to women who live in monogamous households or who have only married once. Marriage instability appears more decisive an influence than type of union. An explanation of this phenomenon involves a number of logical perceptions.

First, women who survive broken marriages and those in polygamous households have fewer opportunities to become pregnant. No matter how fast divorced women aspired to remarry, for a short period (6-12 months), they usually live in the home of the parents or other relatives, under circumstances conducive to celibacy. Furthermore strained relations between a woman and her husband during the period which precedes the divorce probably have a negative effect on fertility.

In a polygamous household a husband commonly visits each of his wives in peri-

odic rotation. In addition, taboos against intercourse after child birth seem better observed in polygamous households. Second, in polygamous households, the average age of husbands exceeds that of those in monogamous ones for every age category of women.

Finally, the impact of sterility, both on type of union and on degree of instability should not be overlooked. In a monogamous household immediate sterility, or the onset of barrenness after a wife has born some children, often induces a couple to divorce or the husband to take a second, fertile wife. Either way, the first wife soon finds herself in a polygamous household. We have already remarked that 82 per cent of women who remarry, accept husbands with at least one wife. Because women who are either unable to give birth or subfecund can nonetheless still hoe, weed, wash and cook, they do not encounter too much difficulties when seeking to remarry.

6. *Conclusions*

Recently there has been much writing about 'the population problem'. It has been suggested that the fast population growth is the greatest single obstacle to the economic and social development of the underdeveloped world, and that family planning or birth control have to be considered as an answer to reduce population growth and to promote economic development (24).

In this paper we intended to show that population, and especially fertility, is a dependent variable, the result of a certain socio-economic and cultural environment. Despite a fast growing population, a relatively high density and a certain penetration of modernity (such as Western education, health and welfare services, cash crops and Ujamaa) in Rungwe district, we did not observe a fundamental change in the Nyakyusa social-economic organisation.

We showed this more extensively as far as the health situation, the marital pattern and the cultural norms for reproduction are concerned. Thus especially on the micro level, but also on the macro level the social and economic conditions of the area are such that for the poor farmers a large family and many children have more positive than negative consequences under given conditions of meagre resources of land and labour and in terms of emotional satisfaction (25).

Only by improving the standard of living of this rural population — which is not a demographic problem but basically a question of redistribution of economic and political power in favour of this population — a development oriented population policy (possibly aimed at slowing down population growth), could prove meaningful.

We believe that Tanzania is correct not to seek for a solution to the problems of development in terms of family planning; because any attempt to strengthen the economy of rural Tanzania by means of birth control programmes boils down to 'putting the cart before the horse', as professor Wertheim (26) puts it.

Notes

¹ In the Rungwe situation where infant mortality was so high, there was, however, little point in asking people how many children they preferred to have. Most never gave a thought to a number in connection with an ideal family size but said directly, 'As many as God wishes', or invented a figure out of courtesy towards their interviewer. Modern methods of birth control are unknown. To check the validity of the 'ideal family size' question, we asked the same group of female respondents twice with a three month interval between questionings. To refine our sample we removed from our respondents any woman who had or lost a child during the three months or whose personal experience during that time could have prejudiced her response. 50% of the women gave the same answer twice. 19% changed their opinion by ± 1 child, 31% by ± 2 or more children (10).

² Some of these measures do not aim directly at reducing the fertility, but have this only as an unintended consequence.

³ We also observed a relation between fertility and religion: Orthodox Christians, i.e. Catholics, Moravians and Lutherans, have more than average fertility. The total fertility of Catholics was 7.7. It should be borne in mind that they are monogamous, that without ex-communication there is no possibility of divorce in their lives, and that they no longer observe traditional taboos which enlarges the number of children.

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Project Group Demography of Developing Countries, University of Utrecht* | Population policy in tropical Africa: an inventory and evaluation

1. *Introduction*

The purpose of this article is two-fold: to give a description of the population-policy measures taken by the various countries in tropical Africa,¹ and to assess the possible effect of these measures. For this assessment one needs insight into the theories developed in the field of population policy and empirical data regarding a number of countries. This will enable us to gauge whether measures taken by the governments of these countries are instrumental to attain the objectives stated.

Africa experiences the highest birth and mortality figures in the world. Until recently, it was thought that fertility was lower in Africa than in Asia and Latin America, but it now appears that birth figures as high as 50‰ are no exceptions.² As a result of improved medical facilities and better care for mother and child, the infant mortality rate, which was until recently exceptionally high, is on the decrease. The high fertility becomes manifest in a rapidly increasing population. This strong population growth has in a number of African countries given rise to measures in the field of population policy. An evaluation of such measures should in the first place be based upon the actual demographic and economic conditions in these countries. In view of Myrdal's words who stated that 'a population programme must work itself into the whole fabric of social life and must interpenetrate and be interpenetrated by all other measures of social change',³ the population-policy measures should ideally have been placed in a much broader framework. This is, however, beyond the scope of this survey. Subsequently, the nature of and the motivation for the existing measures will be reviewed. As a basis for the evaluation, some attention will be devoted to the various types of theories which have a bearing on demographic variables and economic development. Finally, the applicability of these theories under different conditions of development will be considered; at the same time, it will be evaluated to what extent the actual policies pursued correspond to these theories.

2. *Population-policy measures in Africa*⁴

2.1 *General.* The concept of population policy is defined by us as: all legislative measures, administrative programmes and other actions initiated by the governments in order to alter or modify existing population trends in the interest of national survival and welfare.⁵

This definition contains, in our opinion three elements of fundamental importance for an understanding of the concept:

1. the very word 'policy' presupposes a series of integrated measures which are being taken in various sectors (social policy, measures in the field of housing, contraception, abortion etc.);

* The participants in this project-group were: N. Eykelenboom, E. Ketting, E. Koning, N. van Nimwegen, W. Scholten and R. Wiercx.

2. These measures should be taken by governments and not by private organizations;
3. the objectives of the policy should be clearly defined:
 - a. the immediate aim is to influence demographic phenomena, especially natality, the distribution of the population (internal and external migration), as well as its composition;
 - b. the ultimate aim is non-demographic and, concerns objectives of development policy (raising the standard of living and improving the welfare of the family).⁶

Apart from an integrated population-policy, we distinguish 'measures of a demographic nature': these are measures which either concern rather limited aspects of the situation such as family planning programmes by international organizations, or measures which are comprehensive (and thus concern the total population, its composition, distribution, growth and dynamics of growth), but are not placed in the context of the objectives of a development policy. These measures can either be taken by the government or by international organizations, such as, the International Planned Parenthood Federation (I.P.P.F.). The analytical distinction between a population policy and measures of a demographic nature is hard to apply, however, when dividing the countries of tropical Africa on the basis of their national development plans into those which pursue official population policies and those which do not. The criteria for classification are often not available and/or it cannot be determined to what extent the measures adopted in the different sectors of the society have been consciously placed in a population-policy context, although these measures certainly do have some demographic side-effects.

The measures in the field of population in Africa are characterized by the fact that only in recent years in some countries a population policy has been formulated, while for the implementation of this policy, a great dependence on foreign assistance programmes exists. It has to be pointed out that it proved impossible to determine the ratio between foreign aid concerning population problems and a country's own contribution because the latter is often inextricably connected with expenses other than those for purely population purposes. Thus, it is difficult to determine, for example, what part of the money used for a family planning project is intended for health care and what part for reducing the number of children.

In the past many foreign governments and private organizations, the latter in particular, have given assistance to African countries for various population activities, namely:

- a. activities in connection with family planning:
- b. demographic research:
- c. other related activities, such as research in reproductive biology.

In using the term assistance, especially when it is exclusively concerned with birth control, there is a discrepancy between the purported usefulness by the Government of the receiving country and the advantage for those groups in the society for which the assistance is intended. In other words, assistance to the Government does not necessarily imply aid to the population, especially when there is a need to produce many children. This need may arise as a result of the existing socio-

economic situation, inter alia, as an essential factor of production and as a security for the period of old age, particularly in areas where the infant mortality is still considerable. The mentioned activities should be classified as measures of a demographic nature because the broader context of a population policy is lacking. Generally, this assistance encounters the same problems as most other kinds of foreign aid such as lack of continuity, strict criteria with regard to spending, the long lapse of time between the application, approval and receipt of the assistance and the shortages to finances the local contribution. In spite of these difficulties this assistance, has increased substantially in recent years. In 1969 the population assistance (in various forms) rose to 2 U.S. cents per capita for Africa as a whole. In 1970 this amount increased to 3 U.S. cents per capita (Cf. Latin America: 5.8; East Asia: 3.6; South South-East and South-West Asia: 4.3).

These figures regarding the African continent as a whole conceal, however, wide variations between the individual countries. In 1970, the total population assistance to 11 individual countries, amounted to more than \$ 6 000 000. Another \$ 4 000 000 went to the remaining 31 countries in Africa.⁷ The 11 countries which receive the greatest portion of the present aid for population activities are arranged in the table underneath according to the aid received per capita in 1969 and 1970.

Table 1. *Foreign assistance for population-policy measures to African countries, 1969-1970 (US \$)*

Country	Total population (mlns.)		Assistance per capita	
	1969	1970	1969	1970
Liberia	1.2	1.2	.225	.310
Mauritius	0.8	0.8	.190	.110
Tunesia	5.0	5.1	.097	.190
Ghana	8.6	9.0	.025	.150
Kenya	10.5	10.9	.068	.056
Uganda	9.5	9.8	.046	.052
U.A.R.	32.5	33.3	.034	.036
Marocco	15.0	15.6	.013	.030
Nigeria	9.5	9.8	.046	.052
Sierra Leone	2.5	2.6	.008	.015
Tanzania	12.9	13.3	.010	.006

Source: 'Population Assistance to Africa, 1969-1970' Organization for Economic Cooperation and Development, Paris. Accra Population Conference 9-18 dec. 1971.

Kenya, the first country in tropical Africa which announced a 'population policy' directed at slowing down the population growth, illustrates the dependence on foreign aid: in the initial stages in the financial year 1969-1970, the foreign aid surpassed the official national contribution 32 times. In foreign aid, the contribution to F-P. programmes dominate, as is evident from the table below:

The assistance is given bilaterally as well as by international organizations such as the United Nations (U.N.), I.P.P.F. and the Population Council (P.C.). The number of countries that receive aid from the international private organizations exceeds that receiving bilaterally from Government agencies: in 1970, the P.C. supported 12 countries in the whole of Africa in demographic work, as well as in

Table 2. *Population assistance to Africa according to type of expenditure. (U.S. \$)*

Type of expenditure	1969	%	1970	%
Family planning	4.450.940	72.3	7.155.355	78.9
Demographic research	1.194.329	19.4	1.059.601	11.7
Other activities	514.440	8.3	852.520	9.4
Total	6.159.709	100.0	9.067.476	100.0

F.P.-programmes. In 1970, the I.P.P.F. supported F.P.-programmes in 20 African countries, which were partly the same as the 12 P.C.-countries. In many cases, it appears that private organizations find themselves in a better position to finance and support pioneer projects in countries where African governments have not yet officially decided to ask assistance for population activities. In this respect, it should be borne in mind that the international private organizations are for their budget largely dependent upon the national governments in the aid-giving countries.

2.2 Attitudes and measures of African governments with regard to population growth. In view of the difficulty to distinguish the African countries in those with a population policy and those which only undertook certain measures of a demographic nature, we rather divide the countries of tropical Africa according to the attitude expressed as to population growth and the practical measures undertaken in the field of population whether pro- or anti-natal. All African Governments display, in their development plans as well as in other official statements, great concern about the still very high death rate. All development plans therefore include measures directed at a reduction of infant and child mortality by means of an expansion and improvements of medical facilities. The imbalanced distribution of the population and the rapid growth of urban areas are two factors which are considered as a problem in most developing countries. Some countries voice special attempts to develop the rural areas in order to reduce the rural-urban migration (for example, Ghana and Tanzania).⁸ At the same time many African countries have taken measures to slow down or stop foreign migration (e.g., Ghana: Aliens Compliance Order, 1969). On the other hand, fertility is an ignored subject in many countries, in spite of the fact that in these very countries some family planning campaigns are being conducted, albeit in the private sector.

In most African countries no special government measures are taken to influence population growth. The attitude of the governments of these countries may vary from pro-natal e.g. Ethiopia, Lesotho, Malawi, Sierra Leone, Somalia, Tanzania, Zambia, and the Central African Republic, to anti-natal: e.g.: Nigeria and Swaziland. Between these two groups one finds the governments which did not or not yet explicitly state their position with regard to population growth, namely Uganda, Rwanda, Burundi, Dahomey, Togo, Upper Volta, Senegal, Liberia, Gambia, Zaïre, Mali and Chad.⁹ In practically all these countries without an official view some family planning activities are carried out although via foreign organizations in the private sector. Only a few governments propose official measures directed at influencing population growth. These can be distinguished into:

1. Countries which pursue an explicitly pro-natal population policy e.g. Cameroon, Ivory Coast and Gabon. These governments advanced the following reasons for this policy: too low a population density; the necessity to increase the internal market and the great need of labour for the internal development. In order to achieve their objectives these governments prohibit or oppose the import and distribution of contraceptives. Moreover, they undertook or proposed special measures such as paid pregnancy leave for employed women, payment of family allowances and regulation of intervals during work in order to enable women to care for their children.

2. Countries which pursue an explicitly anti-natal population policy e.g. Kenya, Ghana, Mauritius and Botswana. These countries state a wide range of reasons for this policy such as the high costs of population growth, nutrition problems, problems in the field of housing and education, the possibility of achieving a higher standard of living, shortage of arable land, the high rate of unemployment and the local incidence of over population. In order to reduce population growth these governments initiated family planning programmes; they created or proposed to create better job opportunities for women and extended the educational facilities for girls.

We may conclude that many African governments show a growing awareness of the problems concerned with the population. Although the various development plans identify different aspects of the problem and often propose measures to solve these, it remains questionable whether they succeed to implement these measures and — if implemented, — to which extent they are successful. In many countries where demographic measures are taken, the accompanying social measures which could lead to an integral population policy are lacking. In 1970, the Ghana government introduced a family planning-programme as an integral part of the population policy, but it did not manage to implement the proposed social measures, such as the creation of better employment opportunities for women and the extension of educational facilities for girls.

3. *The rationale behind population-policy measures*

Measures which aim to influence demographic processes in developing countries arise in one form or another from the idea that they can stimulate socio-economic development. It is, however, in most cases not clear to determine how the relationship between demographic conditions, on the one hand, and socio-economic development on the other, is perceived by the African governments. As shown in the previous pages, the population-policy measures differ from one country to another. In some of them an explicitly anti-natal policy is pursued, while in others pro-natal measures are taken. In a great number of countries, however, no official position is adopted. If the various types of population policy were the result of measures recommended by demographers and economists, then the diversity would have been understandable. The theory concerning the relation between demographic variables and socio-economic development is far from uniform. Since the different theories do not always arise from the same assumptions and do not always appear to refer to similar situations, we will briefly attempt to determine to what extent the different views can be considered contradictory or supplemen-

tary. Subsequently, an attempt will be made to determine the applicability of the various theories for the different African countries. This may assist us to assess the suitability of the population policy, pursued at present in the various countries to attain the development objectives stated. Broadly speaking, the most important approaches with regard to the relation between demographic variables and socio-economic development can be divided into an optimistic theoretical approach which does not consider the present rapid population growth as a serious impediment to socio-economic development; and a pessimistic theoretical approach in which the present population growth rate is seen as the most serious obstacle for development.¹⁰

3.1 The optimistic approach. The most important representatives are Boserup, Clark and Amin.¹¹ The optimists are primarily concerned with the relation between population size and natural resources. In their theory, they take account of the increased numbers in the future upon which further development will be based. They do not consider a rapid population growth as an impediment to socio-economic development since, in their opinion an increased pressure of the population leads, when the use of the land is intensified, to specialization, co-operation and innovation in agricultural methods. It is not so that the optimists, as is often claimed by their opponents, presuppose that any increase in population pressure leads automatically to the invention of new agricultural methods with higher yields. They have indicated that the traditional, extensive agricultural methods produce on the one hand a higher yield per man hour, but on the other a lower yield per unit of area as compared with more intensive methods. Since a farmer would not be inclined to work harder for the same yield, the tendency to proceed to more intensive methods will not occur, unless this proves to become necessary. This necessity will only arise under conditions of increased population pressure. Once more intensive methods have been accepted, secondary effects come into play which are likely to stimulate socio-economic development in the long run: scale-enlargement, the building of an infrastructure, social amenities etc. These secondary effects can hardly be anticipated in advance by the subsistence-cultivators as advantages of the new methods; they only become visible and effective in the long run. In the short term, only the concomitant disadvantages are manifest such as lower yields per man hour, lower wages in agriculture and, consequently, often an increased migration to the cities. Through this migration, the population pressure is temporarily shifted to the cities. A condition for the envisaged development, as delineated by Clark in particular, is, therefore, that this urban migration should be curtailed. Through a rapid population increase, the socio-economic development is actually stimulated by the side-effects described above. An important aspect is the emerging infrastructure through which an internal market may be created. With increasing population density, it becomes more profitable to make investments in this direction.

The optimists focus their attention almost exclusively on the agricultural sector and avoid the problems associated with the growth of the modern-industrial sector and concomitant problems of urbanization. They do not only concentrate on the economic effects of population growth, but also on the socio-cultural and psy-

chological ones. In short, they have a pronounced interest in processes on the micro level, such as those related to the nuclear family and the extended family. They emphasize the value which large families have for the parents. This value seems often opposed to the interests of socio-economic development on the national (macro) level especially in areas where subsistence agriculture predominates. This partly explains, the often negative attitude of the optimists in respect of birth control programmes. In their view, a narrow, one-sided emphasis is placed on the macro level. Yet the optimists do sometimes give proof, at any rate verbally, of a positive appreciation of the F.P.-programmes, especially when an improvement of the social position of women is also envisaged.

3.2 *The pessimistic approach.* The point of view of the pessimists is much more accepted than that of the optimists. Two sub-types can be distinguished in this approach: one which concerns itself predominantly with the non-monetized section of the society and another which concerns itself with the monetized section. Although these two approaches differ greatly, they both give rise to the conclusion that a reduction of population growth is essential for economic development. Apart from this conclusion, the two approaches do not have much in common. The first one has largely been developed by geographers, and has been received unfavourably by those who concern themselves with the monetized section of the society.

a. *The C.D.P. - approach.* This approach interprets the relation between the size of the population and the available quantity of land as the crux of the matter. To this end it introduced the concept 'Critical Density of Population' (C.D.P.), in 1940, in a very specific situation of threatening starvation among the Lamba in the former Northern Rhodesia. Since there were no short term possibilities to introduce agricultural innovations, owing to lack of knowledge as well as socio-cultural constraints, an attempt was made to find a solution by means of resettling part of the population on vast tracts of unused land. The agricultural specialist determined the quantity of land sufficient to provide a given number of inhabitants with the means of survival under a specific agricultural system. Allan described the concept C.D.P., which was used for these purposes, as follows: 'The human carrying capacity of an area in relation to a given land-use system, expressed in population per square mile; it is the maximum population density which a system is capable of supporting permanently in that environment without damage to land.'¹² In this definition, the existing agricultural system is considered as invariable. This was not entirely unjustified in the situation mentioned above because it concerned a short-term solution. The way in which Allan later used the concept C.D.P., the invariability of the existing agricultural system became much more absolute. In this context, he observes: 'the restrictions imposed by the physical characteristics and by the climate and topography, natural soil poverty and the costs of measures required to create fertility or lack of resources with which to do so set very definite limits to what we can do with land'.¹³ By adopting this point of view, Allan has in fact, on the basis of the description of the concept, C.D.P., defined the concept population pressure in such a way that it remains valid in the long term. Hance has refined and operationalized Allan's definition. He gives 11

indicators for population pressure. All these indicators are symptoms of a changing relationship between population size with an as unchangable conceived agricultural system and the available quantity of cultivable land. While Allan's approach is already quite static, Hance even goes so far as to mention the 'break-down of the indigenous farming system' as one of his indicators.¹⁴ Hance's indicator of population pressure, affords a stimulus for possible development in the view of the optimists. He hardly looks for the possible role of population growth in a process of socio-economic development, but merely investigates to what extent population growth disrupts the existing equilibrium between the population on the one hand, and land used traditionally by the population on the other. This premise is defended by both Allan and Hance with various arguments of a geographical and climatological nature. Apart from this, they consider the socio-cultural circumstances as impediments to innovation so that (in those cases in which the equilibrium is no optimal) very few possibilities remain for improvement of the situation.

V.d. Walle says in a criticism of the concept over-population: 'It has been observed that the problem of density is not the most crucial of demographic problems and that population is not too large in relation to land area, but in relation to reproducible capital, research and educational facilities, an entrepreneurial class, leadership and channels of diffusion'.¹⁵

b. *The cost-benefit approach.* In this approach, a decline in the level of fertility is seen as an incentive to economic development, or even more strongly, as almost the only possibility of achieving development. In the cost-benefit-approach, an attempt is made to calculate the net economic advantage from a reduction in the number of births. This advantage accrues from the savings which can be made because less money is spent on so-called demographic investments. The savings can then be utilized for productive investments.¹⁶ The analysis concerns itself primarily with the macro level: government savings on education etc. and possibilities for a higher income from taxation. The effects of a lower population growth rate are quantified in purely economic terms. The costs involved in reducing the number of births at the present time is compared with the economic advantages which are thereby obtained in the future. Different versions of this approach have been developed. One of these, the so-called investment-planning model, leads to the conclusion that limitation of the number of births gives a greater economic advantage as the per capita income becomes higher. Consequently, its effect is much greater in highly developed countries than in less developed areas. In all these models the emphasis is placed on the possibility of an increase in the amount of invested capital and not on the value of labour as a factor of production. With such an assumption, population growth in a little capitalized economy will always be unfavourable for economic development. Furthermore, consumption is exclusively looked upon as a factor of costs (reduced savings) and economic advantages of population growth, such as the growth towards economies of scale, are not incorporated in the analysis. This also causes a bias in favour of the advantages of a reduction in fertility. Very often, it is not borne in mind that this approach is only applicable to that section of the population which has been absorbed in the money economy. Subsistence agriculture is almost completely ne-

glected, in spite of this sector's great importance in terms of population in many countries in tropical Africa.

Just as in the case of the optimists, this approach presupposes a dynamic development. This development is, however, not determined as in the case of the optimists, by innovation in agriculture, but by the magnitude of the monetary investments directed to industrial development. The pessimists concern themselves primarily with the relationship between population size and the quantity of capital. They hardly pay attention to the secondary effects of population growth. Because this approach focuses at a different situation and a different type of development compared to the optimists, they are not well comparable. It would be better to seek for the applicability of both approaches to specific situations.

4. *Evaluation and Conclusions.*

In comparing the various theories with respect to the relation between demographic variables and socio-economic development, we can make the following observations. The C.D.P.-approach leads to the conclusion that population growth is generally disadvantageous to subsistence-areas; little or no account is taken of the possibilities for intensification of land-use. Moreover, the possible advantages of a rapid population growth are ignored. The optimists, however, take due account of these advantages, while they very often pay little attention to the sometimes limited possibilities for intensification of the agricultural system. The cost-benefit-approach makes very little sense in this type of areas with a very low degree of monetization because it concerns itself almost exclusively with monetary savings. In these areas, one will in the first instance have to search for the possibilities of a more intensive use of the land and for an expansion of employment opportunities in the agricultural sector. Only when this is not possible any more one has to consider suitable population-policy measures. In those cases with good possibilities for more intensive land-use it is very important to restrict migration to the cities. This migration would nullify the eventual long-term advantages of greater population density in the rural areas. In the more monetized sections of the society, especially where the secondary and tertiary sectors of the economy have already somewhat developed, the relevance of the optimistic and the C.D.P.-approach declines. These approaches are to some extent applicable to areas with cash crop production for export. The possibilities to increase the production by means of investments, the presence of cultivable land, the means of transport and a market make the plausibility of the different approaches differ from case to case. The relevance of the pessimistic approach actually increases with the degree of monetization and the level of per capita income in a specific area. Only when a population has become absorbed in the money economy and earns a per capita income to allow for some saving, it becomes useful to calculate the savings resulting from a reduction of the number of children. Only in this situation the parents may be motivated to reduce their number of children, because the costs of children increase with the rise in the level of living, while at the same time the value of children as economic assets for the parents decrease. It becomes clear that the different approaches should to a large extent be considered supplement-

tary. The applicability of each of these methods is closely intertwined with the social-cultural, economic and geographical conditions.

We may now attempt to evaluate the population policy as pursued at present in some countries of tropical Africa. To this end we selected some characteristics which may be considered of relevance for the various approaches. They are compared with the actual policy of these countries. Therefore we restricted our selection to countries with a well-defined population policy.

Table 3. *Comparison between some demographic and economic characteristics and type of population policy*

Country	Type of population policy	Population growth % p. annum	Infant mortality rate %	Pop. per sq. km.	% of pop. in towns	GNP p.c. \$ US	% GNP from agriculture	% of ec. act. population in agriculture
Gabon	+	0.9	229	2	11.4	630	18	84
Cameroun	+	2.2	13712	12	7.3	180	34	84
I. Coast	+	2.3	—	13	19.0	310	34	86
Ghana	—	2.5	156	38	17.5	310	42	56
Kenya	—	3.0	132	19	7.9	150	32	88
Botswana	—	2.0	—	1	2.7	110	47	—
Mauritius	—	2.0	65	421	47.0	240	23	—

+ policy directed at increasing natality

— policy directed at decreasing natality

Among these countries, the position of Mauritius is the most conspicuous: confronted with a high population density, a relatively high degree of urbanization and few possibilities for the intensification of land use, the need to pursue an anti-natal population policy is greater than in any other African country. In line with the cost-benefit approach, a successful anti-natal policy may have a heavy impact since, in view of the relatively high per capita income, substantial savings might be achieved. At the same time, the high degree of urbanization will probably have a favourable effect on the acceptance of birth control measures. The results of Mauritius' policy already appeared in the figures: a relatively low population growth rate in spite of a very low level of infant mortality. For the other countries with an anti-natal policy, the results cannot yet be read from the figures because such policies have only recently been pursued.

The need for a policy directed at decreasing natality in Botswana is not directly clear. In the absence of reliable data the situation does not easily lend itself to analysis. Botswana is one of the countries with a very low population density and in spite of that it suffers from population pressure. This means that the possibilities to intensify land-use, given the economic means, are extremely limited. The government's statement on population policy¹⁷ creates a rather naïve impression and clearly arises from a cost-benefit-approach, hardly applicable to the conditions in this underdeveloped country with a tiny monetary sector. Considering the low per capita income, the savings created by any limitation of births will be very low.

One wonders, whether the economy of Botswana is served by a population policy which is so strongly directed at a decline of fertility.

Ghana and Kenya reveal many similarities. The rather reliable figures, show that either a reduction of fertility or resettlement is essential in some areas, especially in some cash-crop areas. In some other areas, an increase in the population may in the long run actually have a favourable effect on economic development, provided there is no migration to the cities. A regional approach seems necessary. The usefulness of birth control measures, which are taken in the cities in Ghana, correspond to our conclusions, which indicate that birth control among groups firmly incorporated in the money economy, for example in the cities, will stand the best chance of success.

Among the countries which pursue a pronatal population policy, Ivory Coast and Cameroun show obvious similarities with Kenya and Ghana as to both demographic and economic characteristics. The reasons why these countries adopt a completely different policy should therefore be explained in terms of socio-cultural conditions and the colonial legacy. France has always adopted a pro-natal attitude, whereas England earlier considered the possibilities of birth control.

The former French colony Gabon occupies, with its pro-natal attitude, an exceptional position. This country is characterized by a high child mortality and low fertility, which is caused by a very high sterility. This results in an extremely low population growth rate for African conditions. The government's pro-natal attitude in a country with abundant growth possibilities and a high per capita income is fully understandable.

In summary, we can observe that the available data and the present state of theory-development, invites for caution in drawing conclusions. The theory-development is still in its infancy, while the data are incomplete, unreliable and collected on the basis of different criteria. Data on differences within a country are usually not provided whereas those figures which serve as criteria in certain theoretical approaches (e.g. the percentage of cultivable land, the percentage of the population in the subsistence sector, in commercial agriculture and in the modern industrial sector) are particularly lacking. On the basis of Eldridge's definition we can conclude that there are almost nowhere signs of a genuine population policy. Moreover, it appears that decisions, whether or not made for a specific policy, are mostly taken on the grounds of other considerations than those apparently demanded by the socio-economic situation. Finally, we have the impression that also in this field the influence of the earlier colonizer is still great.

Notes

¹ This includes Africa and Malagasy, with the exception of the Mediterranean countries, Spanish Sahara, the Sudan and South Africa. At the same time, for lack of completeness of our material, the following countries are omitted: Mozambique, Angola, Guinee-Bissau and Namibia.

² See: Pradervand, P: 'Les Programmes de Planning Familiales en Afrique' OCDE, Paris, 1970.

- ³ Myrdal, A.: 'Nation and Family', London 1945, p. 2.
- ⁴ For the following data in paragraph 3, use has been made of:
Caldwell, J. C.: 'Population policy: a survey of Commonwealth Africa'. in: J. C. Caldwell & C. Okonjo, eds: 'The population of Tropical Africa', London 1968.
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- ⁵ Eldridge, H. T.: 'Population policies', in: Intern. Enc. of the Social Sciences, London 1968, vol 12. p. 381.
- ⁶ Pradervand, P.: Les Politiques de Population en Afrique Francophone de l'Ouest, Obstacles et possibilités'. (mimeographed) Paris 1973, pp. 87-89.
- ⁷ This figure refers to contributions to individual countries only and excludes the amounts provided for Africa as a whole or to broad geographic regions.
- ⁸ See especially: W. A. Hance: 'Population Migration and Urbanization in Africa' New York 1972.
- ⁹ The attitude of the countries not listed is unknown.
- ¹⁰ The division into an optimistic and a pessimistic theoretical approach is by: Robinson, W. C. en Horlacher, D. E.: 'Population Growth and Economic Welfare'. Reports on Population/Family Planning nr. 6 Febr. 1971.
- ¹¹ See: Boserup, E.: 'The conditions of agricultural growth'. London 1965.
Boserup, E.: 'Population change and economic development in Africa'. Occasional paper. Leiden 1972.
Boserup, E.: 'Population and land-use in the light of recent technical advance in food production'. Occasional paper, London 1969.
Clark, C.: 'Population and land-use', London 1967.
Amin, S.: 'l'Afrique sous-peuplée?' Occasional paper, Accra 1971.
- ¹² Allan, W.: 'The African Husbandman', London 1965. p. 89.
- ¹³ Allan: *ibid.*, p. 11.
- ¹⁴ Hance, W. A.: *ibid.*, p. 417.
- ¹⁵ Walle, E, v.d.: 'The population of Tropical Africa in 1980's in: Arkhurst, F. S.: 'Africa in the seventies and eighties', New York, 1970. p. 265.
- ¹⁶ Robinson, W. C. & Horlacher, D. E.: *ibid.*, p. 16.
- ¹⁷ Rural Africana: *op cit.* p. 34.

Appendix

Details on population policy measures of African countries.

CATEGORY I: countries which pursue an official population policy with the object of retarding the population growth. (*Negative with regard to population growth*).

CATEGORY II:

- a) Countries which consider high population growth figures as a possible barrier to

socio-economic development, but where the Government has not yet proceeded to the formulation of policies directed at a reduction of growth. These countries in particular receive assistance on a small scale from private organizations in order to set up F.P.-programmes. (*Neutral-negative*).

b) Countries which adopt a neutral position with regard to population growth (*neutral*).

c) countries which do not look upon a rapid population growth as unfavourable for socio-economic development, but which do not pursue any explicit anti-natal policy. (*Neutral-positive*).

CATEGORY III: Countries which pursue explicit pro-natal policies (*positive with regard to population growth*).

CATEGORY I: Countries with a policy negative with regard to population growth.

Kenya: Kenya's population policy, which comprised the first national F.P.-programmes in Africa south of the Sahara, was announced in 1966 as an integral part of the 'Five Year Development Plan 1966-1970': fewer children and longer intervals between births would decrease the annual costs of the family in keeping the children at school. Besides, more children would be able to attend higher education. Housing and nutrition problems would decrease. This would result in a higher standard of living and provide the possibility of increased savings in the future.

Kenya's policy is particularly concerned with population growth and to a lesser extent with urbanization. Foreign aid in this field amounts to about \$ 700,000 per annum almost totally devoted to F.P.

Ghana: has an official population policy since 1969. The F.P.-programme, which constitutes an integral part, was approved in January, 1970 and commenced in March. The Government also proposes other measures: such as the creation of better employment opportunities for girls. Thusfar, the Government has done little to carry out this element of its policy.

Part of Ghana's population policy is directed towards internal and international migration. Internally, an attempt has been made to reduce the rural-urban migration by improving the infra-structure of the rural areas. In 1969, immigration was curtailed by the stipulation that all foreigners who did not have a residence permit within 2 weeks (after 18 November) should leave the country. Foreign aid to Ghana, particularly for F.P., amounted to \$ 1,428,070 in 1970.

Mauritius: The Government is mainly concerned about land- and employment problems. Over-population is looked upon as one of the most important socio-economic problems. Permanent emigration from Mauritius is encouraged, while immigration has been curtailed. F.P.-programmes are subsidized by the Government and F.P.-clinics have been established on a large scale.

Mauritius receives foreign aid in the form of financial assistance for the 'Family Planning Association' (from the I.P.P.F.) for contraceptives and experts. In 1971, a new action programme was devised which envisaged the founding of a F.P.-branch within the Ministry of Health; The U.N. were approached for support of this new project.

Botswana: In the 'National Development Plan 1970-75', an official population policy was formulated by the Government. In summary, the statement reads: 'Although

Botswana is a large country in terms of area, it is not decidedly underpopulated in view of the available resources'.

(Botswana's attitude with regard to population density is unique among African countries). 'The present population of 648,000 grows at this moment with about 3% per year, which diminishes the increase of the income per capita of the population by 3%. Unless extensive efforts are made to extend the knowledge of F.P. at the moment that the medical facilities are improved, it is probable that the population growth figure will rise above the 3% so as to become one of the highest in the world. Before the introduction of modern medical facilities, a high birth rate was essential in order to compensate for the high mortality rate and to prevent a decrease of the population. The consequences of decreased mortality, together with a continual high birth rate will lead to a population explosion which could easily undermine the standard of living of the country. It is better to have fewer children who are well fed, dressed, housed and taught than many children of whom not enough care can be taken and who, as a result of this, suffer!!' Foreign aid to Botswana for population activities for F.P. comes from I.P.P.F. and for demographic research from the U.N. Population Fund.

CATEGORY II: *Countries which pursue no official population policies.*

a Neutral-negative:

Nigeria: stimulus to a population policy has been given in the 'Second Development Plan 1970-1974'. The statement commences by emphasizing the possibly controversial character of a population policy in Nigeria. The problems which are connected with a rapid population growth are pointed out, but, attention is also drawn towards the natural sources of Nigeria and the development potential as factors which could solve these problems. The Government provides for the F.P.-needs via the existing health services, but the Nigerian authorities emphasize much less the need for decreasing the population growth than the governments of countries which pursue official anti-natal population politics, e.g. Ghana.

Foreign aid for population activities amounts to about \$ 500,000 (1970) and is mainly for F.P. (especially I.P.P.F.), but also partly for demographic work (P.C.).

Swaziland: Although this country does not pursue a population policy the Government has expressed the desirability of decreasing the fertility figures, on account of the problems which high population growth figures pose for their development projects.

b Neutral:

Uganda: Foreign aid is given in the private sector for F.P. In 1970 this was \$ 511,611, of which the most important part came from the U.S. Aid for F.P.-training in Makerere.

Rwanda & Burundi: On a small scale something is being done about F.P. via certain 'Mother and child health projects', for which the I.P.P.F. gives assistance.

Dahomey, Togo & Upper Volta: On a small scale activities for F.P. are undertaken in the private sector. The money for this comes largely from private organizations abroad. It is probable that France gives assistance in the demographic field, but as to how and how much no detailed information is available.

Senegal: The Government reveals a growing interest in population issues. A fertility

survey (U.N. Population Fund) and a research programme on reproductive biology is presently carried out. For demographic research, assistance is received from France.

Liberia: Some F.P.-programmes are in progress here. They are carried out via 'Mother and child health centres'. The money for this comes mainly from U.S. Aid, including I.P.P.F. which supports Family Planning Assistance. Liberia received a considerable amount of foreign aid for population activities per head of the population, compared with other African countries. This is especially used for demographic research.

Gambia: F.P. activities are undertaken on a small scale and by private organizations.

Zaire: F.P. activities are undertaken on a small scale and by private organizations.

Mali: Demographic problems are not referred to in development plans. A first F.P. centre is under construction.

Chad: Receives some aid from France for demographic research.

c neutral-positive:

Ethiopia: In the 'Second Five Year Development, Plan 1965-1969', it is stated: 'During the coming 5 years, the population growth is estimated at about 2 million, while the population will be about 9 million larger in 1974 than in 1954. This rapid population growth is encouraging, seen both from the availability of labour as from the enlargement of the internal market, especially because Ethiopia is sparsely populated.'

Ethiopia receives foreign aid (about \$ 70,000 per annum) from governmental as well as from private organizations for F.P. in the private sector and for demographic research.

Lesotho & Malawi: Receives support from the I.P.P.F. for F.P. although on a small scale. These Governments do not view the extension of F.P. positively.

Sierra Leone: The Government is favourably disposed towards population growth because it is hoped that more intensive cultivation of certain areas will encourage economic development.

Somalia: In the 'First Five Year Plan 1963-1967', it is written: 'The population growth figure is not known. The birthrate is probably high, but, considering the insufficient health facilities, it is improbable that the rate of death is low. Thus the natural increase cannot be very great. The death rate will, however, decline with the improvement of the health facilities, as is proposed in the 'Plan' and will result in an increase in the population growth figure. But the Republic of Somalia is not over-populated: considering the relatively small extent of the population and the large quantity of natural resources, which will be used in an increasing measure in the economic development, it is not probable that the country will in the future have a population problem.'

Tanzania: The Government considers a strong population growth at this moment favourable for socio-economic development. In the private sector, Tanzania receives aid for F.P. from the I.P.P.F. while the Population Council gives aid for demographic research.

Zambia: The Government is not negatively disposed towards population growth. Zambia especially receives aid for demographic research. No private sector assistance for F.P.

Central African Republic: Population growth is considered very positively because of enlargement of the productive capacity and the purchasing power.

CATEGORY III: *Countries which pursue explicit pro-natal policies.*

Cameroon: All measures to limit the population are opposed by the Government until the population has reached 15 million. At the moment, it is 6 million. Furthermore, the Government has taken some pro-natal measures such as: paid pregnancy leave for working women, family allowances, and intervals during work in order to give mothers the opportunity to care for their children.

Ivory Coast and Gabon: Prohibition on import of contraceptives and strong sanctions against breaking this law. The governments hope that the extension of health facilities will increase population growth.

For lack of information, the following countries have not been included in the list: Mauritania, Niger, Guinee, Equatorial Guinee, Malagasi, the Peoples Republic of Congo, Rhodesia, Angola, Mozambique, Guinee Bissau and Namibia.

S. Koesoebjono and Kivuto Ndeti/ Some problems of implementation of population policy in Kenya*

Kenya has been the first African country south of the Sahara which has adopted family planning as an official government's policy in the middle of 1960. By now several other governments in this region have adopted family planning. Family planning is one of the elements of Kenya's population policy which also includes, for example, land settlement and internal migration.

This paper aims to describe the main problems which are encountered in the implementation of the family planning programme, especially in view of the cultural context in which this programme is implemented.

1. *Aspects of population growth*

Information on birth and mortality can be obtained from the registration of vital statistics, the census and demographic surveys. However, in most African countries, the statistics on registration are almost absent and where existing they are usually restricted to urban areas and of doubtful reliability. In Kenya, such a registration was introduced at the beginning of the 20th century, but it was confined to Europeans and Asians.¹ Registration covering the whole population started in 1962. In spite of a large coverage of this registration, the data thus collected is insufficient for determining population trends.

At the end of the nineteenth century the Kenyan African population was estimated at 2.5 million. Before the Second World War, these estimations ranged between 2.5 and 4 million.² Records of tax payers which are obviously unreliable, formed the basis for these estimations. Censuses have regularly been undertaken among the non-African population which covered Europeans, Asians and Arabs, viz. in 1911, 1921, 1926 and 1931. The 1948 census included communities in Kenya. The subsequent two censuses were held in 1962 and 1969. The 1962 census, which took place sixteen months before the country's independence, was subjected to various administrative and political strains. Nonetheless, both the 1962 and the 1969 census are considered to be rather reliable. Census data reveal that the total population increased by about 60% in the period between 1948 and 1962 and by 27% in the next seven years (Table 1). The proportion of the non-Africans in the total population increased from 2.9% in 1948 to 3.1% in 1962, whereas in 1969 it was reduced to 1.9%. For the total population, an average annual growth rate of 3% in the period of 1948 — 1962 is accepted as approximating the truth.³ The subsequent inter-censal period shows a higher rate than the previous one. The current growth of 3.3% per annum⁴ ranks as one of the highest in Africa.

This average growth rate mainly results from birth and death rates since migration from outside the country is negligible. A birth rate of 50 per thousand and a death rate of 20 per thousand appeared from the analysis of the 1962 census. A

* This is a shortened version of a paper written in 1972 for the Seminar on 'Population and Economic Growth in Africa' held in Leiden, December 1972.

Table 1. *Kenya's population at the moment of the censuses 1948, 1962 and 1969*

Population	1948	1962	1969
African	5,251,120	8,365,942	10,733,202
Non-African			
Asian	97,687	176,613	139,037
European	29,660	55,769	40,593
Arab	24,174	34,048	27,886
Others	3,325	3,901	1,987
TOTAL Non-African	154,846	270,321	209,503
TOTAL KENYA	5,405,966	8,636,263	10,942,705

Source: Statistical Abstract, 1971.

similar analysis of the 1969 census resulted in a birth and death rate of respectively 50 and 17 per thousand.

In 1948 the infant mortality was estimated at about 190 thousand live births. This declined to the level of 112 and 126 per thousand for respectively girls and boys in 1969. Consequently, the life expectancy at birth increased from about 36 years in 1948 to 49 years in 1969 for both sexes. The average number of children born alive to a Kenyan African woman at the age of 50 (which is assumed to be the end of her reproductive period) was between 6 and 7 in 1948 and 6.8 in 1962. The last census gave an average number of *7.6 children per woman*. This trend in fertility and mortality is reflected in the age composition. The age distribution of the African population in the last two censuses is shown in Table 2. Like most African countries, Kenya's population can be considered as young. A considerable proportion of the population is under 15 (46%) whereas the group of 60 and older is slightly higher than 5%. The broad base of the age pyramids results from a relatively high fertility and a sharp decline in infant mortality.

Table 2. *Percentage age distribution of Kenyan Africans*⁵

Census	-15	15-59	60 and older	TOTAL
1962	46.0	48.5	5.5	100.0
1969	46.0	48.6	5.4	100.0

Source: Kenya Population Census 1962, Vol. 3 and 4 and 1969 vol. 1.

The above account presents the growth and the main demographic characteristics of Kenya's population. This data is important since it forms the basis for population projections, from which conclusions can be drawn for the future. These may then constitute the basis for a population policy. Family planning is often justified in terms of contributing to the solution of the problem of unemployment, while rapid population growth is considered as the main stumblingblock to growth in per capita income. This line of argument was also followed by the Kenyan government, when the decision was taken to set-up a family planning programme. However, in drawing conclusions from the results of a population projection, social and economic conditions have to be taken into account as well. In default of

this, population growth may be blamed as the main obstacle to development. According to Bondestam: 'Geographical distribution, growth and other characteristics of a population are functions of its economy, i.e. of the internal economic strength and of the politico-economic structure of the country.⁶ It is a fallacy to suppose that problems of unemployment, education etc. will be solved automatically if the population growth rate is slowed down. Since the causes of these difficulties are tied to the economic and social conditions, only a change in these conditions could contribute to fundamental solutions. Only in the short run and on a simple material level of living may a reduction of natality increase the per capita income.⁷ The reasoning that per capita income increases only if growth in gross national income is not consumed by a growing population, is the main argument which made the Kenyan government decide to set up a family planning programme.

2. *Background and implementation of the family planning programme*

In mid-1963 the Population Council's Advisory Mission invited by the Government of Kenya to advise 'on the ideal rate of growth' put forward its recommendations which laid the basis for a subsequent family planning programme as part of the country's population policy.⁸ These recommendations comprised, among other things, the following aspects: the organisational framework, methods of contraception, research on population and financing of the policy through foreign aid. After careful consideration of the report, the government declared its intention 'to place strong emphasis on measures to promote family planning education',⁹ and several recommendations of the Advisory Mission were included in the Development Plan 1966-70. Early 1966, the government stated that it would 'pursue vigorously policies designed to reduce the rate of population growth through voluntary means and authorized a programme to be undertaken in cooperation with the Family Planning Association of Kenya'.¹⁰ The following outline presents the organisational framework of the programme, and some of its main achievements.¹¹

2.1 Family planning was accepted as a government policy in 1966 because the population issue was considered of national importance for Kenya's development. It was decided that an interministerial council would be the most appropriate organ for implementation. The family planning programme was closely linked to the national health programme and greater emphasis was placed on birth spacing than on birth control.¹² In February 1967, a National Family Planning Council was set up comprising different ministries and the Family Planning Association of Kenya (FPAK).¹³ The council was supposed to take decisions concerning the population policy and to supervise the running of the programme. This Council was dissolved already in October 1967 because of internal disagreements. Notwithstanding controversial opinions on the need of a family planning council, the government made a new attempt in April 1972 and set up a National Family Planning Committee. Whereas before October 1967, the Ministry of Health was just one of the ministries involved in the programme, the administration and coordination of the programme now came under the jurisdiction of this ministry. The

ministry thus became fully responsible for the family planning programme. The programme has become part and parcel of the national health programme and is incorporated into the maternal and child health programme.

2.2 Before the dissolution of the Council, a Working Committee was set up. This continued its activities and became a policy and decision-making body. One of the issues raised by this Committee was the relation between the government and the private FPAK. The FPAK would be active in the field of education (which also implied information and motivation) according to the guidelines worked out by the Ministry of Health. These field activities were left to the Association since it already had an important number of field workers at its disposal. Moreover, the Association would offer clinic services in areas where the government was not operating i.e. mainly in the urban areas. The services provided in these clinics were however, not free of charge. Notwithstanding the more or less (coordinated) action, frictions arose between the government and the Association. An important factor was the higher salaries paid by the Association.

The Working Committee stated that family planning activities would be undertaken in areas where general health facilities were available. The services in government clinics would be free of charge. These services were not confined to the supply of contraceptive methods only, but would also have to include assistance to infertile women desiring children. However, next to nothing has been undertaken as to the latter aspect. A choice of several alternative contraceptives were recommended but only IUD and pills are currently used. Injectables can be obtained, but are not part of the programme.¹⁴ Abortion is still illegal, although discussions on this matter have recently attracted some attention.

A third relevant subject of discussion in the Working Committee was the activities of the International Planned Parenthood Federation (IPPF). The Federation does not only provide financial support to the FPAK, but, since January 1967, it also provides its own services in its clinic in Nairobi. Besides, it runs seven mobile units now operating and attached to different government clinics, the first of which started in early 1968. Nowadays, more than one third of the regularly operating government clinics are supported by these units.

In 1969 the Working Committee established three sub-committees as advisory bodies on information, training, evaluation and research. At the end of 1970, each sub-committee made specific recommendations which influenced the programme policy.

The group on training recommended, among other things, that 'all medical staff would have to undergo training in relevant aspects of family planning (including clinical skills)'. This would be carried out by integration of the subject into the curriculae of different training institutions and by means of in-service training. In November 1971 the Ministry of Health approved and accepted standards and curriculae of family planning courses for midwives. Until the middle of 1972 training for such personnel has been carried out by foreigners in the form of in-service training and on an ad-hoc basis. The sub-committee on information recommended an extended cadre of 1 000 field educators to be trained and employed by 1975/76 under the supervision of a family planning council. The sub-

committee on evaluation and research suggested a target to reduce the annual rate of population growth by 10% from 3.3% to 3.0%.¹⁵ This could only be reached if the average number of new visitors to family planning clinics would increase from the 3.000 per month in 1970 to 24 000 per month.

2.3 From the start the implementation of the programme has been carried out by foreign advisors. For the overall government advice on family planning, the Population Council has seconded medical advisors from 1966 until September 1972. For only 4 months (September 1971 until January 1972), a Kenyan doctor has fulfilled this function. The administrative activities have been carried out by Swedish advisors from 1969 until the present. A Kenyan administrator has been appointed as counterpart only by September 1971. In 1970 a Kenyan nurse was appointed as a health educator, but she was not involved in any training activities until the beginning of 1972. No successor has been nominated after she had left the Ministry in June 1972. The family planning evaluation and research unit is part of the Section of Epidemiology and Medical Statistics at the Ministry of Health. This unit is responsible for the collection and processing of data, for the analysis and evaluation of the results. From the start in late 1968 until November 1972, this section has been run by two teams of foreigners as part of the Dutch aid. The health education unit is very much involved in producing family planning materials. For this aspects, the services of experts have been secured through USAID.¹⁶

2.4 The average monthly number of first visitors to family planning clinics has strongly increased since 1968, but recently a levelling off in this increase was observable (Table 3). In 1971 the total number of first visitors represents only 1.6%

Table 3. *Number of first visitors and annual increase*

Year	Average Monthly Number of first Visitors	Increase in %
1968	976	154
1969	2,480	18
1970	2,928	17
1971	3,425	

Source: Ministry of Health.

of the number of women of 15 – 49. These figures do not give any impression of success. There are strong indications that the *drop-out* among users is very high after their first visit to a clinic and almost total after two years.

Since the beginning of the distribution, a shift in the use of contraceptive methods from IUD towards the pill has taken place (Table 4). The proportion of IUD-users declined from 42% in 1968 to 16% in 1971, whereas in the same period an increase can be observed in pill-users from 56% to 72%. It is known that the number of drop-outs among pill-users is considerably higher than that among IUD-users. This high proportion of pill-users in the programme refutes the Population

Table 4. *Distribution of contraceptive users*

Method	1968	1971
IUD	42.3	15.5
Pill	55.6	72.1
Injection	1.2	7.5
Condom	0.6	4.0
Others	0.3	0.9
	100.0	100.0

Source: Ministry of Health.

Council's recommendation 'that the family planning programme in Kenya should rely heavily on the intra-uterine device'.

The running of the more than 250 clinics is the responsibility of para-medical personnel. There is a considerable shortage of such staff and it often occurs that nurses and midwives are not released to conduct family planning sessions. This irregularity of activities has its repercussions upon potential acceptors of contraceptives. An indicator for the lack of enthusiasm is the number of attendances during the first six months of 1971 from 199 reporting clinics (Table 5). It appears that over 58% of the government clinics catered for only 100 clients or fewer. Less than 6% of the clinics reported over 500 attendances. This apparent lack of enthusiasm could be attributed to such factors as delays in dispensing contraceptives, inadequate staff, lack of trained personnel, hidden pressure from clients-kinsmen and social structure, lack of motivational services, fictions and fads about side-effects of contraceptives, an unclear official policy of family planning etc. These factors may indicate that the impact of family planning on the health of mother and child is still rather insignificant.

The Kenya family planning programme (which is accepted as a government's programme since 1966) is a politically sensitive and controversial issue. The Working Committee, which is the policy-making body since the programme has landed in

Table 5. *Number of attendances (first visits and revisits) in the 199 reporting government clinics from January to June, 1971*

Number of Clients January to June, 1971	Number of Clinics	Percentage
Less than 50 clients	58	29.2
51-100	58	29.2
101-150	17	8.5
151-200	13	3.5
201-250	15	6.5
251-300	7	7.6
301-350	8	4.6
351-400	5	2.5
401-500	7	3.6
501 and over	11	5.6

Source: Ministry of Health.

the Ministry of Health, has held no meetings for a long period of time. This situation of confusion has not been cleared up after the setting up of a National Family Planning Committee in early 1972 and it is still unknown whether this Committee has taken over the function of the Working Committee in matters of policy and decision making. Neither has it been announced whether the National Family Planning Committee will be an inter-ministerial body or not. This situation has considerable repercussions on the implementation of the programme and its progress. Since family planning has become part of the health programme and has been incorporated in the maternal and child health care, the emphasis in the underlying ideology has been shifted from an economic to a health argument.

There are obviously too many hands, both foreign and domestic, involved in family planning activities in Kenya. There are those who believe family planning should be primarily a health programme. In this case family planning is equated with the spacing of births which contributes to better maternal and child care. This is the aspect which the Kenyan government likes to emphasize. On the other hand, there are those who see family planning as the most important issue in the social and economic development of Kenya. For them the philosophy of family planning is confined to a reduction of the high rate of population growth which hampers Kenya's economic growth to a considerable extent. In this case the emphasis is on the reduction of fertility within a definite period of time, if Kenya is to achieve any economic development within the foreseeable future. The argument is that the averted birth would result into cumulative savings in monetary terms, within the next few years. These savings could be deployed in expanding essential services throughout the country. The philosophers of this ideology are most impatient with local policy makers who have failed to come up with an effective population policy. Finally, there is a third category consisting of the foreign governments, foundations, universities, organisations etc. In their view Kenya moves towards chaos and destruction because of the high proportion of the population in the lower age categories, and the positive attitude towards high fertility rates. The latter phenomenon was reflected in various surveys carried out among the Kenyan population. The pessimism expressed by these foreign bodies is strictly neo-malthusian. In this type of assistance directed to Family planning, foreign interests define the plan, finance it and execute the programmes through their nationals. The Government's share is reduced to that of a participant observer.

3. The Cultural context

We would like to indicate what appears to us to be the cause of the major problem hindering family planning activities in Kenya. We will tackle the issue by leaning more to attitudinal studies on how social structure, beliefs and value systems related to sex and off-spring determine sexual behaviour and family size. The impact of many deep-rooted customs in African societies is easily overlooked by non-Africans. Reining, for example, stated that 'the use of contraceptives in the modern sense is practically unknown and induced abortions are rare . . . there is no record of any woman or man having enquired for these or information regarding those at any of the hospitals. This is countered by the opposite: a consid-

erable number of women questioned said that they used medicine in an attempt to become pregnant'.¹⁷ More recent studies, however, show that various herbs (La-boho) used across the western region of Kenya and Uganda are abortifacients which have acted as *fertility control* for centuries in these regions. These herbs also cause sterility. We suppose this is one of the factors behind Reining's statement that 'low fertility in these regions must be largely physiological in character but the nature of these physiological factors cannot be determined on the basis of the information at present available'. Apart from these 'incomprehensible physiological factors' of fertility control there are others of a different nature.

A survey in Banyankole carried out by Masters and Iraka to determine the influence of custom and tradition on maternal and child care revealed some of these hidden factors inhibiting family planning activities. They found that 40% of the respondent women wanted as many children as possible. These women gave the following reasons: '(a) some children die, making replacement necessary (b) if they failed to produce their husband could take another wife (c) they did not wish to reduce the size of their clan (d) pregnancy was a woman's major battle, if she dies in labour she dies bravely (e) children would fend for themselves as soon as they were old enough. Some children would go to school and when they will have finished would help to look after their brothers and sisters (f) there were two Ankole proverbs mentioned: an elephant can never fail to carry its tusks and what is yours can never inconvenience you'.¹⁸ The attitude shown in the above extract shows an entrenched belief system among the Banyakole. The individual clans form the basis for the conical clan organisation of the Banyakole's social structure. The evolution of this social organisation is due to environmental conditions which demand centralized social order not only to ward-off the traditional enemies of Banyakole, but also affect the internal solidarity of the group. Replacement of members of the clan or the lineage is an intrinsic principle in every species for continued survival. Pregnancy is a test for 'feminine mystique' and even if it leads to the death of the woman, it is regarded as an act in defence of matriarchy or mother-right. It is obvious that such attitudes in many Kenyan societies present a serious challenge to foreign innovations.

Herzog's study among the Kikuyu pointed out that factors limiting family planning may be due to a system of customary nomenclature. 'In Kenya, naming practices and associated beliefs might be well one of the cultural factors which encourage large families. Kikuyu children were named (both traditionally and in modern times) in a rigidly determined sequential order, the first four after their grandparents and the rest after the husband's and wife's brothers and sisters'¹⁹. . . . The majority of the peoples of Kenya take special interest in the name that children get. 'Giving identity is a very important event in the life of a child . . . the system of naming gives a neophyte a life identity which the possessor transmits biologically and culturally to the coming generations. Note how some cultures, for instance, Kikuyu and Meru take the trouble to device a system which prepares the identity even before the child is born'²⁰. Relations between the ancestors and the living may not be such an important matter in the ethos of western man. However, the African man still maintains very important links with the ancestors, and in almost all African cultures people attach considerable importance to their

genealogical history. *Agnation and matriliney* are conceived as historical or attitudinal points in a dead-living continuum of African reality.

Among the So people living in Moroto, Kadam and Napak maintains: 'children . . . bring significant wealth to parents. Bridewealth, cattle brought into the patrilineage by daughters may be used to pay for the wives lineage sons or may be used as an important food resource during extended periods of deprivation . . . The notion of limiting the number of children is foreign and considered absurd by the So. They see no connection between few children and more food per child and greater health of children. The prime function of sex for most of the women questioned was procreation, so much so that at menopause they cease to make love'²¹.

It is quite clear that beliefs and value systems regarding children and sexual behaviour run deep into the social fabric of most cultural systems. One of the problems family planning activities in Kenya encounter is the inability of the innovators to relate meaningfully family planning with the social and cultural conditions of Kenyan societies. The emphasis on a clinical approach supplemented by modern communication technology is in our opinion a false start for the whole programme. The Kenyans are in fact urged to transform their culturally determined sexual behaviour by taking the materialistic attitude of the western man as their frame of reference. This attempt at sexual transformation imposed from outside Kenyan society takes no account of the deep moral and ethical currents which lie at the base of Kenyan society. The patterns of sexual behaviour and the attitudes behind it have been part and parcel of the general evolution of the African cultures and societies. Through the process of cultural rationalisation, attitudes usually outlive the facts upon which they are founded. The presence of innumerable superstitions and symbolic acts in all cultures of the world testify to this. Because of attitude rationalisation, people's actual behaviour does not always correspond to the attitude. People have learned to live with their attitudes and whatever changes innovators may envisage must be couched in long-term adaptation processes. 'Customs that have governed the lives of peoples for hundreds of years form one of the areas where people find it most difficult to change. The medical practitioner is often puzzled when his imported concatenation and prescriptions do not appear to make dramatic impression on his sick patients. Quite often his advice is based on what he himself has been used to as a custom of his own country. He may not realize that the patient cannot understand the situation in any way other than that based on the customs under which he has been brought up'²².

4. *Concluding remarks*

The paper devoted considerable attention to organisational problems encountered in implementing the population programme as recommended by the Population Council report. Part of these problems relate to the lack of clarification on the government population policy. The Ministry of Health has acted as the spearhead in the implementation of whatever government policy has been. The Ministries of Education and Social Service have also expressed interest in population matters, but apart from that very little is being done to actualize these interests. The Ministry of Finance and Economic Planning has expressed a desire and to an

extent have actualized them, by setting up a Central Bureau of Statistics and gone a long way in collecting information related to population matters. It should also be mentioned that this Ministry has a plan to include a data collection unit on family planning in the demographic section. It seems as if other ministries and some institutions of learning want to establish their own population planning unit. Of course, if this comes true, it will reflect attention for a fashion presently in the market, rather than an actual commitment to Kenya's population issues. This point needs to be emphasized since a variety of funds-providing agencies seems willing to give money for any kind of project bearing links (real or imaginary) with the issue of population growth. Some more problems of organisation, implementation, competition etc. could be expected as the proliferation of family planning units is intensified. To avoid this waste of resources, it may be essential to have a general co-ordinating government agency, a point that has been highlighted in the paper. This agency was also one of the original Population Council's recommendations.

The family planning innovators in Kenya would do this country a great service if they recognised the relativity of their present enthusiasm in the context of the above statements. Kenya is economically under-developed and population growth is just one element of the complicated phenomenon of underdevelopment. The country's economic growth is subject to manipulations of international control. Presumably, Kenyans are expected to be mute on this issue and concentrate on family planning. We are not sure to what extent family planning or Kenya's fertility control either as a health problem or as a redeeming factor in Kenya's social and economic progress will release the country from international and multinational economic control. It is the fashion which diverts our energy from the real issues in development.

Notes and References

¹ The registration of births started on the 20th April, 1904 and that of deaths on the 23rd January, 1906.

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² Ministry of Economic Planning and Development, Statistics Division, Kenya Population Census 1962, Vol. 3, October 1966, p. 1.

³ Ministry of Economic Planning and Development, Statistics Division, Kenya Statistical Digest, Vol. 1. N^o 1. September 1963, p. 3-5.

⁴ Ministry of Finance and Economic Planning, Statistics Division, Kenya Statistica Digest, Vol. IX, N^o 2, June 1971, p. 1-7.

⁵ For 1948 Blacker gave the following distribution

-16	16-45	46+	Total
48.1	43.2	8.7	100.0

J. G. C. Blacker - The demography of East Africa, in the Natural Resources of East Africa, E. W. Russell (ed.), 1962, p. 22-36.

⁶ L. Bondestam - The population situation of Ethiopia, Part 3, Ethiopian Nutrition Institute, N^o 3, August 1972, p. 98.

- ⁷ A. Sauvy - Les Charges et les avantages de la croissance de la population. *Population*, 27 (1) Janvier-Février 1972, p. 10.
- ⁸ Family Planning in Kenya, Published by the Ministry of Economic Planning and Development, 1967.
- ⁹ Development Plan 1966-70, p. 324.
- ¹⁰ Development Plan 1970-74, p. 500.
- ¹¹ For a description of the background of the family planning programme in Kenya, see our article 'Background of Kenya's Population Policy', *Journal of Eastern African Research and Development*, Vol. 3, N° 1, 1973, p. 75-88.
- ¹² J. C. Likimani and J. J. Russell, *The Kenya National Family Planning Programme*; OECD, Paris, April 1970.
- ¹³ The Association started giving services in 1957 and is affiliated with the International Planned Parenthood Federation (I.P.P.F.) since 1962.
- ¹⁴ Injectables can be obtained at private general practitioners, two government clinics as experiments, the F.P.A.K. clinics and the I.P.P.F.'s clinic in Nairobi. This last clinic dispenses injectables free of charge since July 1972.
- ¹⁵ The Population Council Advisory Mission believes that a national programme could reduce fertility markedly. For Kenya the reduction could be as much as 50% in 10-15 years. *Op. cit.* p. 10.
- Likimani and Russell, *op. cit.* p. 2: The only target set to date has been the rather vague one of reducing the rate of natural increase from 3% per annum to 2% per annum within the ten year period following the inception of the programme.
- ¹⁶ For detailed information on donors, see our article 'Background to Kenya's Population Policy'.
- ¹⁷ In: A. Molnos, *Cultural Source Materials for Population Planning in East Africa*, Vol. I, E.A.P.H. 1972, p. 128.
- ¹⁸ *Ibid.*, p. 137-138.
- ¹⁹ *Ibid.*, p. 158.
- ²⁰ K. Ndeti in *East African Social Science Conference 1969*, p. 1128.
- ²¹ A. Molnos, *op. cit.*, p. 160.
- ²² *African Scientist*, Vol. I, N° 1, June 1970.

H. A. de Gans, K. de Jonge, A. C. Kuijsten/ A contraceptive to revolution?

An evaluation of Dutch policy regarding family planning assistance.

In this paper we will try to analyse the ideology behind the family planning¹ assistance programmes the Dutch Government sponsors, within the more general framework of so-called development aid to the developing countries.

Starting with a discussion of the rather important place the population issue is given in the views of opinion leaders and organizations in the Netherlands, we next try to evaluate the sometimes only gradual differences between the Dutch political parties' official views on the birth control issue in developing countries. After that, we will confront these official views with the practical policy of recent Dutch governments.

In our opinion this policy has in practice resulted in a family planning assistance programme that does not extend the boundaries of what is to be regarded as beneficial to safeguarding the position of the Netherlands in the world. In our concluding paragraph therefore we plea for another 'mental background' for family planning assistance to the developing countries.

1. *The population issue in the Netherlands*

We presuppose that any official Netherlands' view on cause and importance of the 'population problem' in developing countries is related with ideas about the cause and the importance of the population growth factor in the domestic situation. Whatever this relation might be, one peculiarity immediately catches the eye: the most urgent problem for developing countries is defined as the relation between population growth and economic growth by itself; as far as the domestic situation is concerned one is inclined to emphasize both population growth and economic growth in their environmental context. Especially this last issue has been discussed very heatedly and intensely in the past years: the Dutch translation of the Report to the Club of Rome 'The Limits to Growth'² became a best seller.

We assume that the reader is familiar with the contents of this report, and confine ourselves to the remark that its greatest danger is the suggestive nature of its conclusions, against which serious objections can be made. Three objections against the Report's conclusions we regard as most relevant in this context:

- a. the Report deals with its subject-matter in a way that detaches it from the international economic and political power relations. For this reason it is presented as 'non-political', while in reality of course it is everything but that.
- b. its analysis is based upon the numerical interrelation of a number of quantified variables, e.g. population growth, necessity of food supplies, use of resources. The outcome of this analysis leads necessarily to distortions, regarding the circumstance that the most important variable mentioned, the population factor, especially in developing countries depends on determining forces about which we cannot speak only in quantitative terms.³
- c. the Report recommends an integral approach in solving the problems it fore-

sees, but nevertheless at the same time mentions population growth as the most crucial factor in need of immediate attempts to slow it down, regardless of policy measures on the other issues. In doing this, it leads attention away from the relevance of an integral approach, and in fact promotes the dangerous search for technological solutions for basically political and socio-economic problems. In this context it may be relevant to quote Adler-Karisson⁴: 'only (by) multiplying the population of poor countries six times do we increase the burden on world resources as much as we do by doubling the living standard in our rich countries or put differently: doubling the population of the poor countries has the same effect as a mere 17% increase in our own living standard.'

Not recognizing this fact presents the danger that people (public opinion, authorities) regard population control as the first and foremost means to stave off a feared future world catastrophe. In a situation in which the success of attempts to stimulate the social and economic development in poor countries is largely determined by the existing international politico-economic relations, it is only too easy to divert attention from the role of this essential condition by emphasizing one aspect of the total problem, viz. population growth.

This diversion of attention, from the basic cause of the low rate of economic growth in developing countries to subordinate ones, finds its parallel in the evaluation of the domestic situation. The pollution problem recently became a public issue in this country; this public awareness received a very strong impulse from the mentioned Report to the Club of Rome, and similarly population growth rose to the unenviable status of 'main factor causing the environmental problem' in several circles, both public institutions and private organizations.⁵

Of course, in contrast to such views there are other opinions: the action group STROHALM (The last straw) emphasizes that it is just the contemporary socio-economic development that is incompatible with a sufficient guarantee for environmental quality, and Professor Wertheim criticized the policy of Western governments with regard to the underdeveloped countries.⁶

An 'intermediate' position appears from a document compiled by six prominent members of the three so-called 'progressive political parties': the Mansholt-report.⁷ Because these progressive parties nowadays participate in government, their views will possibly influence the Government's position in the near future. The Mansholt-Report attempts to give a political translation of (again) the problems put forward in the Report to the Club of Rome. It explores the causes bringing about the catastrophe Meadows prophesizes, and to this end elaborates on factors such as: the ideology of progress ubiquitous in the rich western world; science that has drifted apart from its societal context; the capitalist production system; the obsolete national and international political structures; and the international struggle for power between the industrialised countries. As a result, in almost all respects, the Third World can be depicted as a passive victim of these factors. The Report leads to a number of concrete recommendations, viz. reducing the world's rate of population growth, slowing down its rate of economic growth, and levelling the incomes. In order to achieve these objectives, a fundamental revision of the national and international economic structures, such as a further democratisation of economic decision-making, will be a necessary pre-

condition. According to the authors, these objectives cannot be reached on a national level alone, but will have to be strived for at least on an European level, and some even on a world level, in which Europe might serve as an example. So it seems as if the authors realize that the distribution of wealth (national and international) goes parallel with the distribution of power. But this political conclusion is only expressed in general terms, and is not connected with any practical suggestion. Moreover, insufficient emphasis is laid on the effect of a change in the power relations (inter- as well as intra-national) as an essential pre-condition for slowing down the world rate of economic growth and to equalize income differences. As a consequence of this vagueness one will too easily be inclined (again) to look for solutions by tackling the so-called population problem.⁸

Furthermore, this acknowledgment, in very general terms, of the political foundation of the matter at stake, is hardly in accordance with the Report's positive appreciation of the European Economic Community.

Taking the world-wide distribution of wealth as an important objective, the extension of the economic and political power of Europe can be very dangerous for the poor countries; 'First, the enlargement of EEC will most probably represent a step backwards in the perspective of a possible development of a world trade system beneficial to the developing countries. Second, the development of a European super power that will eventually act in a concerted manner externally to secure its economic political interests in large parts of the world, is in conflict with the long-term interest of the developing countries'.⁹

Recapitulating, we fear that in the Netherlands (as of course in some other countries, notably the United States) a population myth might arise, a myth implying that all problems the world encounters are regarded in the first place, as a consequence of population growth. When our impression that Dutch public opinion is particularly susceptible to such a population myth is correct, it may be hypothesised that this is somehow related to its particular demographic situation: an until recently relatively rapid population growth (although rapidly slowing down now) and an extremely high overall population density.

2. The view of the political parties¹⁰

Because of the fragmentation of Dutch political life, every election leads to a coalition government. This necessitates a certain degree of agreement between the parties that support the government coalition as far as the main points of its policy are concerned, while there is a lesser need to such agreement on the issues that are regarded of minor importance.

In practice, this means that the parties that constitute government make a compromise on a number of issues, especially those which make up the main points of the government's programme. In order to make a classification of Dutch political parties that suits the subject-matter of this paper, two criteria seem to be the most relevant:

- a. the distinction between confessional and non-confessional parties;
- b. that between right-wing and left-wing parties.

Both criteria only partially run parallel; the first criterium can be seen as a dichotomy, the second as a continuum.¹¹ The discussion of the views of Dutch po-

litical parties on matters of birth, domestic and overseas, will be restricted to those of the parties belonging to the two main blocks, the confessional and the progressive alliance, respectively, situated on the right-wing and left-wing of the continuum. In matters of *internal policy*, the *confessionals* consider the number of children primarily as the parents' responsibility. Therefore, (some methods of) birth control and sex education are considered as acceptable by all three of them, but not so abortion and sterilization. But, especially the Catholics always stressed that considering this as the parents' responsibility automatically implies that Government has no right to intervene in this matter by way of an active population policy. It is only recently that a change of attitude seems to have taken place in this matter. Therefore, considering the influence of the confessional parties in Dutch politics in the last decades it is not surprising that the internal population issue has always been handled carefully. The parties of the *progressive alliance*, together with the other left-wing and most of the non-confessional right-wing parties, always have been more or less clearly in favour of an active population policy at home, directed at least at a decrease in the growth of the Dutch population. Emphasizing, like the confessionals, that individual freedom should not be restricted, the progressives state that family planning should depend on legal accessibility and ample availability of contraceptives (abortion and sterilization included) and the possibility for all individuals to get birth control advice on a strictly non-normative base. In these matters they therefore advocate governmental stimulation.

The dichotomy confessional-nonconfessional is the most relevant criterion in matters of internal population policy. Since, however, family planning assistance to developing countries is part of the policy pursued with regard to development aid in general, in this issue the left-wing / right-wing criterion is the more relevant one. Regarding *development aid in general*, the left-wing parties (and so the *progressive alliance*) state to aim at a re-structuring of the world economy and regard an increase of Dutch development aid as a pre-requisite to attain this objective in the more or less distant future.¹²

Far from opposing development aid as such, the main *confessional parties* are somewhat less inclined to underline the necessity of changing world economic and trade relations and also less inclined to go to the same lengths as the progressives in increasing Dutch development aid.

On the issue of *family planning assistance* as a necessity or desirability for the effectiveness of development aid, the major non-confessional parties all emphasize the importance of birth control ventures in developing countries. So, according to the parties of the *progressive alliance*, high priority should be given to programmes aiming at a decrease of population growth, and therefore Dutch aid in this field should be increased, both in absolute amounts and as a proportion of the total development aid budget. The question whether this family planning assistance should be given through bilateral or multilateral channels may, according to the progressives, only depend on the wishes of the aid-receiving countries themselves. The main *confessional parties* also stress the desirability of implementing population programmes in developing countries, but wish to do so only at the explicit request of these countries. They have neither made a clear stand on the issue of

the priority of such population programmes vis-a-vis other sectors of development aid, nor on the issue of its bilateral or multilateral financing. Moreover, it is striking that especially the Catholics adopt a rather ambiguous attitude in this issue: they seem to have no objection to support active growth-reducing programmes of developing countries, while at the same time they hesitate to give their full support to a similar policy in the Netherlands.¹³

3. *The role of the experts*

Besides the views of the political parties, those of the experts may be important in policy decision-making. These experts are not only involved in the implementation of birth control programmes, but also have direct opportunities to influence government officials. This is so because they have the opportunity to form pressure groups that may influence government and its bureaucratic apparatus, or because they are simply a part of that apparatus.

These experts drawn from different backgrounds (medical, sociological, demographical, anthropological, etc. . .), formerly used to work rather individually. Nowadays they are co-operating in two institutions:

- The Foundation for Birth Control in Developing Countries (Stichting Geboorteregelingsprojecten in Ontwikkelingslanden — SGO —)
- The Study group for Transcultural Birth Control of the Royal Tropical Institute (Werkgroep Transkulturele Geboorteregeling van het Koninklijk Instituut voor de Tropen).

In the *Studygroup*¹⁴ experiences in the field of birth control projects are exchanged, whereas the *Foundation* aims at being a forum for persons and organizations interested in problems and activities concerning birth control in developing countries. In order to support birth control activities in these countries as effectively as possible and to promote insight into the social and cultural factors that influence human procreation in these societies, the *Foundation* tries to acquire funds for activities in the field of birth control. Several experts are members of both institutions, which may give them key positions in the total network of birth control activities.

Five projects are being executed or have been executed in the field of family planning: in Pakistan, Kenya, Tunisia and two projects in Indonesia. These projects were financed by the Directorate for International Technical Aid (Direktie Internationale Technische Hulp — DITH —), a department of the Ministry of Foreign Affairs and carried out by university departments and research workers of the Royal Tropical Institute. This Institute, financed for 85% from the Netherlands development aid budget, has a key position in birth control activities because of its relations with DITH. Moreover, its most important officials at the same time are the representatives of the Dutch Government in international organizations such as the World Health Organisation (WHO) and the United Nations Fund for Population Activities (UNFPA). In spite of their narrow organizational ties, however, the experts' influence proved insufficient to counter a shift in Dutch policy to a mainly multilateral approach of family planning aid. The experts have not even been informed in advance about this shift, notwithstanding their strong pleas for a bilateral approach.¹⁵

To all these experts, birth control seems essential for solving the Third World's development problem. Two medical experts e.g. chose the slogan 'The Population Bomb keeps Ticking' as a title for a report to the Government¹⁶ in which they asked for a high priority to be given to the population problem. Surprisingly, later on in their report they consider birth control only as a medical advise to the human individual in order to preserve a 'healthy' human race. The sociologists and anthropologists among these experts consider the population problem as one of the most important underdevelopment-preserving factors. In the explicit view of one of them, for example, the family planning programmes have the important function of checking the population explosion that seriously impedes socio-economic development of the poor countries.¹⁷ Pleas are even made for the use of direct or indirect pressure to lower the birth rate in developing countries.¹⁸ Although these experts state that the slowing down of population growth should of course be accompanied by socio-economic development, in fact they all co-operate in family planning projects in countries (Pakistan, Indonesia, Kenya, Tunisia), the governments of which do not seem to make very serious attempts to develop the rural areas and the peasant masses. We do not intend to accuse these specialists of bad faith, but we do maintain that they, and especially the social scientists among them, made a poor analysis of the fundamental conditions of the phenomenon of underdevelopment.

4. The government's view on birth control in developing countries and its policy in this matter

The government views development aid as a means to realize the objectives of its foreign policy. These objects are to promote peace and to safeguard the Netherlands' position in the world, while at the same time it is stated that Dutch development aid should promote juster political and economic relations in the world.¹⁹

Obviously, these objectives could well be contradictory and one wonders how this effects the government's aid policy. From the explanatory note to the 1973 Foreign Affairs Budget,²⁰ it appears that the Dutch Government underlines a kind of harmony idea. The government's reasoning starts from the idea of a parallelism of interests between poor and rich countries in the long run. Although on a short term the existence of conflicting interests is not denied, still the consequences of the long run view are applied to the present development aid policy, by rejecting a confrontation policy from the side of the poor countries as a political means (as is done nowadays e.g. by the Arab states). The principle that the determination of priorities for the development process should take place by the developing countries themselves fits rather well within these concepts, but so does also the fact that quite often the impulse to set up development projects originates within the Netherlands.²¹

Other features of Dutch development aid are the importance of conditional aid and the concentration on a limited number of countries. This 'concentration policy' aims at an optimal efficiency of the aid. The selection of the concentration countries, however, at the same time promotes the development of Dutch trade and industry and thus favours the establishment of development projects by

Dutch industry for its own benefit: preference for aid is given to those countries where the investments of Dutch enterprises are not jeopardized.²² Therefore, in our opinion Dutch development aid policy is in practice especially concerned with the first-mentioned objective, i.e. to safeguard the Netherlands' interests, and has little to do with a policy aiming at an improvement of the position of the masses in the poor countries.

Restricting ourselves now to the issue of family planning assistance since the second half of the sixties, we find the Netherlands have been actively involved in 'solving' the world population problem. Prior to that, the subject was taboo. An important event in this respect was the ratification of the World Leaders' Declaration on Population, in December 1967.²³ Reflecting government's growing concern with the world population issue, several official statements and publications have appeared since then,²⁴ all postulating that the population problem is one of the crucial problems of developing countries. The most recent expression of this view in the international field was the Netherlands' vote in favour of the ECOSOC-resolution in May 1972.

This resolution requested the U.N. member states to provide the necessary information and facilities with regard to 'family planning' to all individuals, before 1980, in accordance with their national population policies and needs. Moreover, the rich countries were asked to give assistance in the field of population policy, if the developing countries requested for it. Nevertheless Dutch Government feels some hesitation in giving this aid, as is shown by its conditions (justified by the argument that every population policy deeply influences the internal relations in the countries concerned) for such aid, that

- a. co-operation in birth control programmes by the population should be fully voluntary, and
- b. establishing a population policy should be primarily an internal matter of governments concerned.

Therefore, the Dutch policy is closely modelled on paragraph 65 of the International Development Strategy which emphasizes every government's sovereignty in population matters and which states that aid in this field should not replace other forms of development aid. Consequently, the Dutch government stresses that the population problem in developing countries is a very complicated one, that simply providing contraceptives will not be sufficient, and that a more comprehensive approach will be needed, including care for mother and child, adult education, community development etc. In view of the sensitivity towards family planning aid that is said to exist in the developing countries, and because of the government's opinion that the seriousness and complexity of the population problem requires a co-ordinated and world-comprising solution, the Netherlands recently decided to shift to a multilateralization of the aid in this field. Nowadays funds are therefore channeled through international organizations such as UNFPA and the International Planned Parenthood Federation (IPPF), while the (on-going) bilateral projects are still allowed to be completed. In 1967 the first such bilateral family planning programme started, in Pakistan followed by projects in Kenya (1968), Tunisia (1970) and Indonesia (1968 and 1970). From 1967 to November 1971,

5.54 million guilders were spent on these bilateral family planning projects.²⁵ These amounts formed only a very small part of the total development aid funds, but in the case of the two African projects in Kenya and Tunisia, the family planning funds constituted 5.8 resp. 17.4 percent of total development aid given to these countries. This contribution made the Netherlands, as far as Africa is concerned, one of the most important donor countries (of assistance) in this field.²⁶ In the framework of multilateralization, the Netherlands had granted a first contribution of 180,000 guilders to UNFPA in 1968, while in 1971 it was decided to grant 3.6 million guilders to this fund. For 1972 a doubling of this amount was foreseen (7.2 million) and for the following years increases were planned to a total of 18.5 million guilders in 1975. Although this boils down to over 50 million guilders in the 1972-1975 period, it is only 1 percent of total Dutch development aid. So, the rightness of the government's statement that especially in the last years it allocated a marked priority to assistance in solving the population problem totally depends on the frame of reference one wishes to choose.

The Dutch government's view on the relation between population problems and development problems may be regarded as well-balanced in some respects, e.g. where it states that it does not consider birth control programmes as a universal remedy for the development problem. But, as we have seen before, theoretical views and practical policies have to a great deal been determined by the views of the three main confessional parties, which are very cautious in their stands on population policy. We suppose that the government's policy in this matter is not only influenced by the presumed sensitivities that may exist in the developing countries with regard to 'imported' birth control, but also by a fear of sensitivity in this respect by the voters at home.

If we review the Dutch family planning assistance, some inconsistencies appear:

- It is said that Dutch family planning assistance takes place only when governments of developing countries ask for it. At least in some cases, however, the impulses to the setting up of projects originated in the Netherlands.²⁷
- The fact that Dutch government, in giving assistance, does not formulate further conditions on the general socio-economic policy of aid-receiving countries is not in line with its statements on the need of more integrated approaches. Aid in the field of family planning is given to countries with governments of which one may question the willingness to pay attention to the introduction of the institutional and organizational structures required for the promotion of wellbeing and prosperity of all people, and particularly the peasant masses.
- In spite of the cautious position to population and family planning questions, which the Dutch government adopts verbally, it recently started to subsidize the IPPF, an institution with very outspoken neo-malthusian ideas. Either the Netherlands' government has little eye for the often misleading propaganda of this Federation with regard to family planning issues, or it shares its opinions without openly saying so.²⁸
- Recently the Dutch government shifted from a bilateral to a multilateral approach against the advice of many of its experts and also contrary to the wishes of some of the aid-receiving countries at stake. Although there is no reason to ques-

tion a shift like this in general as far as family planning is concerned, one may ask whether it furthers the ideal of attaining family planning assistance integrated in the much wider framework of a general socio-economic development programme. It seems reasonable to assume that the causes of this shift stem from the Dutch political and bureaucratic situation; i.e. on the one hand pressure of members of the political parties who reject direct Dutch interference in population problems and on the other hand efforts of high civil servants in the Ministry of Foreign Affairs who try, by means of multilateralisation, to reduce the influence of both government and parliament in this 'precarious' matter.²⁹

After we finished our paper for the seminar on 'Population and Economic Growth in Africa', in the Spring of 1973 a new coalition government was constituted, in which the Progressive Alliance dominates. As far as Foreign Policy and development aid are concerned, this new government has stated that the policy of Dutch governments of the last decade needs drastical revision, because the analysis and models they have been using in order to tackle the development problem were inadequate: i.e. in these models insufficient attention has been paid to the inter- and intra-national balance of power. Because of that omission, only part of reality has been taken into account, which means that the analyses used did not correspond to reality.³⁰ The goals of the new government's policy are directed at the improvement of the position of the economically and socially weak: identification with the 'under-privileged' in concreto means identification with the poor countries and within these countries with those people living under the worst conditions.³¹ This policy therefore must be directed at real freedom for the developing countries. This freedom is seen as a precondition for attaining a just and peaceful world community. It implies among other things that the poor countries should no longer be dominated by foreign influences.³²

Although this new government's view seems to be rather promising, it is difficult to trace it in its policy as stipulated for 1974. It can be questioned whether multilateral frameworks are to be preferred — as the government advocates — for discussions on internal policy issues of developing countries (e.g. the distribution of income),³³ since these multilateral frameworks are in most cases meeting places of ruling élites and privileged classes in these countries. As could be expected from the pre-election party programmes, the new government is convinced that a reduction of population growth to acceptable proportions is imperative. It considers an active population policy necessary, although it admits at the same time that population growth is not an isolated problem, but has to be regarded in close relation with agrarian and industrial development and also with environmental conditions.³⁴ In the actual policy of the new government, this view has resulted in an increase in the grant to UNFPA in 1974 (14.5 million guilders as compared to 10.5 million guilders in 1973 and in 1972 7.2 million). The conclusion is inevitable: in spite of eloquent phraseology about family planning aid integrated in broader development assistance, more money than before will be spent on non-integrated family planning projects.

5. Conclusion

There are only gradual differences between the views of Dutch political parties on the role of family planning aid within total development assistance. Moreover, no Dutch coalition government can escape a policy of compromise between the ideas of different political parties. Up to 1972, this policy was closest to the point of view of the confessional parties. It was against this background also that Dutch policy on family planning aid was formulated within a more general framework of development aid. Since 1972, this policy did not change substantially in spite of a change in government.

The crucial questions are: is the Netherlands' foreign aid policy instrumental to the removal of structural obstacles to the problem of underdevelopment, and what is the role of family planning assistance in removing these structural obstacles. In our opinion the fundamental cause of underdevelopment must be sought in the Center-Periphery structure³⁵: the mechanism in which one nation (or group of nations) dominates another one (or others). Following Galtung's framework in this matter, it will be clear that there can be no 'population solution' to the problems of underdevelopment. Of course we do not deny that under specific conditions a genuine development strategy may incorporate some kind of population policy. Our basic assumption is that population growth is a dependent variable, determined by socio-economic and cultural conditions. A development ideology that stresses the existence of parallel interests between poor and rich countries, implying that it is in the interest of the rich countries to help the poor countries to make up their arrears, forgets that the underdevelopment of certain countries should to a large extent be explained as a consequence of the development of others.

At present the rapid population growth in poor countries is considered one of the most important (sometimes even the most important) obstacles to the desired social and economic development. Population growth is considered a crucial and independent variable, and birth control is propagated to reduce it. Recently some other aspects have come forward in connection with population growth, such as environmental deterioration and exhaustion of resources. Besides, the rich countries have been accused of using birth control as a political weapon: family planning and birth control are regarded as political means to preserve the existing structures that are feared to be affected by the rapidly growing populations in the poor countries, leading to growing unrest among the masses in these countries and growing instability of the regimes in power there.³⁶ Whether this last accusation is true or not, in our opinion assistance in the fields of birth control and family planning is only acceptable when it is placed within the framework of a general development programme, which aims at a fundamental transformation of the present international economic structure. The Dutch policy on family planning assistance, although only one per cent of total development aid and its policy on development aid in general, hardly meets these criteria. Neither do the views of the Dutch political parties: apart from the Communists and the Pacifist-Socialist Party, all Dutch political parties and the Government based their views either implicitly or explicitly on the general ideology of the 'harmony of interests' between

rich and poor countries. While this presumed harmony of interests until now has never kept the rich countries from political, military and economic intervention in the underdeveloped world, in this way either causing or maintaining underdevelopment, this harmony of interests suddenly becomes an important argument in reduction of population growth and environmental protection on a world scale. Deliberately or not, such an argument therefore distracts the attention from the crucial issues at stake. This must be reason enough to persist in critically looking at family planning projects, especially during this World Population Year, but also after that.

References

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¹ In this paper we define the concepts 'family planning', 'birth control' and 'population policy' in the same way as Klaas de Jonge did in his article 'Mythe en realiteit van geboortenbeperking in Afrika', *Kroniek van Afrika*, Assen, 1972/3, p. 129. These definitions are as follows:

family planning: utilization of contraceptives in order to increase the space between births or to limit births and the battle against infertility/sterility;

birth control: systematic utilization of contraceptive means on a large scale and sometimes also abortion aimed at decreasing the population growth. This is mostly organized by the government;

population policy: all measures taken by a government with the intention to influence the size, structure and distribution of the population (from birth control to measures in the fields of education or emancipation of women).

Often the first two terms are interchanged, e.g. the 'family planning' programmes sponsored by the Dutch Government must be understood as part of birth control programmes.

² Dennis Meadows, *Rapport van de club van Rome*, Utrecht 1972.

³ A similar criticism was made by Gunnar Myrdal on April 16, 1972, in a television panel discussion on the Club of Rome Report. Myrdal particularly stressed the point that, because fertility is not incontestably determined by the kind of relations that are quantified in the Meadows models, the birth rate (and so population growth) can never be regarded as a function of the other variables the models take into account.

⁴ Gunner Adler-Karisson, 'The mote and the beam, Population explosion and the explosion of living standards', *On family planning in Ethiopia*, no. 1, 1972.

⁵ This has been done overtly by institutions as the Stichting Welzijn en Bevolkingsgroei (Foundation for Welfare and Population Growth) and the Raad voor Milieudefensie (Board for Environmental Defence), which have sponsored the Dutch edition of 'Blueprint for Survival', Ehrlich's Population Explosion and Commoner's The closing circle. The Foundation for Ideal Advertisement (SIRE) also should be mentioned in this respect. Alarmed by the increasing pollution, this Foundation initiated an advertising campaign for birth control, exclaiming: 'Far too many children's lives will not be worth living. Birth control is a necessity.' More hideously population growth is regard-

ed as a main cause of environmental deterioration in the Government Report handling on Environmental Care (Urgentienota Milieuhygiëne) of the Ministry of Public Health and Environmental Care (1972): the graphical representations in this report of population growth in the period 1900-2000 in comparison with the growth of the rate of turnover of Dutch chemical industries in the period 1948-1970 are designed in a flagrantly misleading way.

⁶ In his publications, notably his *'Evolution and Revolution'*, Wertheim puts forward his point of view, which differs widely from officially held views. E.g., he considers the introduction of birth control techniques by western countries in the countries of the Third World as one of the many attempts to find a 'contraceptive to revolution', although he rightly doubts whether family planning assistance set up to such ends will have any effect in those traditional social structures that are meant to be 'protected' from revolutions. Wertheim rejects the term developing countries and prefers to speak about 'countries that are purposely kept in check.'

⁷ We used the text of this Report as it appeared in the VARA-na-kijk-krant *'Maak de wereld bewoonbaar voor iedereen'* Knippenber's Uitgeverij, Utrecht, 1972. In this context we purposely used the word 'intermediate', because in our opinion the analysis made in the Report sometimes very closely resembles the analysis of Strohmalm or Wertheim, while in contrast the implications of its conclusions are much more reminiscent of the safeguard- our position mentality mentioned before, as the continuation of our text tries to demonstrate.

⁸ This has actually been the case. In June 1972 a member of one of the parties belonging to the so-called 'progressive alliance' in the Second Chamber of Parliament pleaded for a considerable increase in the Dutch contribution to family planning projects in developing countries.

⁹ Hege Hveen and Ole Kristian Holthe, EEC and the Third World, in: *Instant Research on Peace and Violence*, Nr. 2, Finland, 1972.

¹⁰ The data used in this paragraph are mainly taken from the official 1971 pre-election party programmes and are only valid as such. Therefore, they often obscure real differences between parties and they never can be regarded as consequential to actual policy once these parties get power.

¹¹ For outsiders it is difficult to get some insight into Dutch politics; their attention is usually drawn to the enormous political differentiation: 28 parties took part in the 1971 election. The composition of the Second Chamber of Parliament in the last years has been as follows:

Parties	Number of seats in Second Chamber		
	1967	1971	Nov. 1972
Catholic Peoples Party (KVP)	42	35	27
Anti-Revolutionary Party (ARP)	15	13	14
Christian-Historical Union (CHU)	12	10	7
Major Christian Parties	69	58	48
Labour Party (PvdA)	37	39	43
Democrats 1966 (D'66)	7	11	6
Political Party Radicals (PPR)	—	2	7
Progressive Alliance	44	52	56

Parties	Number of seats in Second Chamber		
	1967	1971	Nov. 1972
Liberals (VVD)	17	16	22
Democratic Socialists (DS'70)	–	8	6
Communist Party (CPN)	5	6	7
Pacifist-Socialist Party (PSP)	4	2	2
Orthodox Protestant Parties (SGP, GPV)		5	5
Orthodox Catholic Party (RKPN)		–	1
Right-wing categorial parties (Farmers Party (BP), Party of Small Entrepreneurs (NMP) a.o.)	11	3	3
	150	150	150

¹² As a consequence, the present government (the core of which is constituted by members of the progressive alliance) intends to increase development aid to 1.2 percent of Gross National Product at market costs (or 1.5 percent at net factor costs) up to 1976. See: Toelichting Rijksbegroting voor het dienstjaar 1974, Ch. 3.

¹³ We wish to stress that in this place we only make a statement on the Catholics' general position in these matters not implying whether in our opinion for whatever reason a domestic growth reducing population policy is desirable or not.

¹⁴ Dr. H. Smits and Prof. Dr. A. A. Haspels, *Nederland, geboortenregeling en ontwikkelingsamenwerking*, Amsterdam, KIT, afd. Tropische Hygiëne, Febr. 1972.

¹⁵ Naturally, such a bilateral approach makes it easier for the experts, their pupils and assistants, to get research funds and so to remain active in a field which offers career opportunities. This was formulated quite clearly by Dr. Heeren, who remarked, with regard to the Dutch family planning in Tunisia:

'There have been some applications for family planning aid for other areas from the side of Tunisia. These were rejected by the Dutch government with the reference 'we only finish the current project and for the rest you had better contact the United Nations'. The UN have founded a special fund for this kind of matters (cf. UNFPA is meant here) and the Dutch Government has contributed loyally to it. I assume that it will be increased next year, but in my opinion *it must be regretted that those new applications cannot be met with, because in the meantime the Dutch have acquired specialists in this field*. There are a number of people who have worked very enthusiastically at these projects and have consequently acquired a certain extent of specialism. When the project will have been finished these will be unemployed. *Their specialist knowledge will be lost*'. (underlinings by the authors) in: *Overbevolking begint thuis*, verslag van een IKOR-themaprogramma van 18 en 19 juni 1972.

¹⁶ Smits and Haspels, *ibid*, 1972.

¹⁷ Prof. dr. J. D. Speckmann, Family Planning in Pakistan, *Sociologische Gids*, May/June 1970.

¹⁸ 'Alternatieven in geboortenregeling', Panel 4-2-1972, KIT, Amsterdam.

¹⁹ Rijksbegroting voor het dienstjaar 1972. Hoofdstuk V - Buitenlandse Zaken, Memorie van Toelichting, bijlage V: Vierjarenprogramma van de Nederlandse Ontwikkelingsamenwerking 1972-1973.

²⁰ Het ontwikkelingsprogramma voor 1973 betreffende de Nederlandse internationale

samenwerking, in *Internationale Samenwerking*, 5e jaargang no. 7 september 1972 pp. 144-158.

²¹ See e.g. The report of Quik and Kraak on their journey to Indonesia, NUFFIC, 8 June 1971.

²² For criticism on Dutch development aid, see

– Helpt Hollands Hulp, visie van X min Y op ontwikkelingsamenwerking, NOVIB, Den Haag 1972.

– Evaluatie van de Nederlandse Ontwikkelingshulp, rapport met 8 bijlagen Uitg. Ministerie van Buitenlandse Zaken, Den Haag 1969.

– Eric Pearl, Nederlandse macht in de Derde Wereld, Amsterdam 1971.

– Nederlandse ontwikkelingshulp in dienst van kapitaalsbelangen, T.A.S., jaargang 8 nr. 1, juni 1973.

²³ 'The peace of the world is of paramount importance to the community of nations, and our governments are devoting their best efforts to improving the prospects for peace in this and succeeding generations. But another great problem threatens the world — a problem less visible but not less immediate: That is the problem of un-planned population growth.'

²⁴ – Acties op het gebied van het bevolkingsvraagstuk? Nederlandse bilaterale hulp ter versterking van nationale programma's *Internationale Samenwerking*, september 1968, pp. 96-97.

– Beleidsdebat m.b.t. het Departement van Economische Zaken, *Verslag van de Handelingen van de Tweede Kamer*, 81e vergadering, 22 juni 1972, pp. 3725-3734.

– Het Ontwikkelingsprogramma voor 1973 betreffende de Nederlandse internationale samenwerking, *Internationale Samenwerking*, sept. 1972.

– Projecten in het kader van het dedefinancieringsprogramma en het uitgebreide technische hulpprogramma, *Brief van de Minister zonder Portefeuille* (ontwikkelingssamenwerking) van 18 november 1971.

²⁵ See (24): Projecten etc.

²⁶ Amerikaanse werkgroep bepleit centrale aanpak van het bevolkingsprobleem, in *Internationale Samenwerking*, 2e jaarg. nr. 8/okt. 1969, p. 275.

²⁷ See the report of Quik and Kraak on their journey to Indonesia, NUFFIC, 8 June 1971.

²⁸ – Aklili Mewae, Lars Bondestam and Tamrat Kebede, 'Tomorrow the problem will even be more severe, IPPF's misleading propaganda challenged' in *On family planning in Ethiopia* no. 2, May 1972.

– J. de Leeuwe, 'N.V.S.H. and I.P.P.F. and Population Policies', paper presented to the Seminar on Population and Economic Growth in Africa, 18-22 December 1972, Afrika-Studiecentrum, Leiden.

– J. J. Sterkenburg and K. de Jonge, Some notes on the International Planned Parenthood Federation and its relevance for Africa, paper presented to the Seminar on Population and Economic Growth in Africa, 18-22 December 1972, Afrika-Studiecentrum, Leiden.

²⁹ According to the Ministry of Foreign Affairs, the first cause is untrue and logically untenable because 'from an ethical point of view it would not mean any difference for family planning projects whether the means would be made available through a bilateral or a multilateral agreement as in both cases the moral responsibility for this

policy is the same.' Letter of the Ministry of Foreign Affairs of 21-11-1972 to the authors of **this article**.

³⁰ Rijksbegroting voor het Dienstjaar 1974, Memorie van Toelichting, Hoofdstuk V Buitenlandse Zaken, Zitting 1973-1974 - 12.6000, p. 27.

³¹ *ibid*, p. 28.

³² *ibid*, p. 28.

³³ Verklaring van vier organisaties (Interkerkelijk Vredesberaad, NOVIB, Pax Christi, X min Y beweging): Kritiek op Nederlands regeringsbeleid. *Internationale Samenwerking*, 5e jaargang nr. 20, 14 december 1973, p. 3.

³⁴ Rijksbegroting voor het Dienstjaar 1974, Memorie van Toelichting, Hoofdstuk, V, Buitenlandse Zaken, p. 25.

³⁵ Johan Galtung: A Structural Theory of Imperialism; *Journal of Peace Research*, vol. 8, 1971 pp. 81-117.

³⁶ Quoted by Pradervand, Pierre, 'Les Pays Nantis et la Limitation des Naissances dans le Tiers Monde', *Développement et Civilisations*, Revue Trimestrielle, no. 39/40 Mai-Juin 1970, p. 15.

Thérèse Gerold - Scheepers / Literature on the demographic situation and some of its economic implications in developing Africa

This literature report presents a selection of topics rather than an exhaustive enumeration of all recent publications concerning the problem as indicated in the heading.

The titles have been drawn from different sources. First, from publications of essays, based on papers presented at population conferences in Africa (*Caldwell & Okonjo*, '68; *Ominde & Ejiogu*, '72; *Accra papers*, '71). Secondly, from the annotated bibliography in *Population Index (Jan. '69 to Sept. '73)*. Thirdly, from the bibliography made by *Radel* ('71). Personal communication with Klaas de Jonge, research officer at the Afrika-Studiecentrum (ASC), brought to our attention publications which were hitherto not easily accessible.

The greater part of the books and articles are available at the library of the ASC.

The methodology of demography, one of the aspects which has fallen outside the scope of this report, has been fully discussed in the study by *Brass* ('68). *Driver* ('72) has afforded an annotated bibliography on family planning.

Specialistic terms on demography are explained in the *Multilingual Demographic Dictionary* ('58).

1. *The demographic situation*

By the middle of 1969 Africa's TOTAL POPULATION was estimated at 345 million, which means an average density of 11 persons per sq. km. Whereas Africa's land surface amounts to 22.3 per cent of the world's land surface, it contains less than 10 per cent of the world's total population (*Demogr. Handb. Afr.*, '71, 6). These general figures for the continent as a whole conceal wide regional differences not only in population size and distribution but also in population structure and growth.

Looking at the POPULATION DISTRIBUTION, one notices an unevenness amongst the five sub-regions as well as amongst the individual countries. (*Demogr. Handb. Afr.*, '71, 11-4; *Hance*, '70, 65). West Africa, for instance, has a third of the population of Africa on a quarter of the total area, whereas Nigeria and the UAR together constitute 27.7 per cent of Africa's population, while covering less than 1/15 of the continent (*Demogr. Handb. Afr.*, '71, 11). A recent survey by *Hance* ('70, 64-127) points at similar differences between individual countries or broad regions in Africa. Regional studies by *Hilton* ('68), *Clarke* ('68) and *Ominde* ('68, 93-7), have shed more light upon population distribution, respectively in Ghana, Sierra Leone and Kenya. While they, on the one hand, explain the observed short-distance differences on historical and ecological grounds, such as slave raids, tribal warfare, physical conditions and epidemics, on the other hand, economic and modernization factors behind the differences are explained in terms of urbanization, the various forms of land utilization and certain policies of land settlement.

The POPULATION STRUCTURE gives an indication of both the present and the future

demographic situation. Age-specific fertility and mortality rates foretell the future process of growth of the population (*Pradervand*, '72-73, 358). Therefore, data on age distribution helps the methodologist in his attempts to verify estimates of fertility and mortality (*Brass*, '68^b, 358-9). With an average of about 43 per cent of the total population under 15 years, 53 per cent in the working-age group from 15-59, and 4 per cent older than 60, the population of Africa can be considered as predominantly young (*Demogr. Handb. Afr.*, '71, 23-4; *Survey of Econ. Cond. in Afr.*, '71, 338-9). Although the predominance of the younger age categories is ubiquitous, some regional differences are recorded. *Gendreau & Nadot* ('67, IX-X-15 ff), after having given detailed information on age distribution among males and females in a number of rural and urban areas in francophone Africa, proceed further into the methodological aspects behind the deviations in age pyramids.

Females generally outnumber males in most African countries (*Demogr. Handb. Afr.*, '71, 25-8). For some of the countries the regional differences in age as well as in sex distribution are accounted for by an outflow of men in the working age group from rural areas, as demonstrated by *Ominde* ('68, 111-22) in his analysis on distortions of age-sex pyramids in urban areas and rural districts in Kenya.

Apart from migration, the age structure of a population is determined by rates of FERTILITY AND MORTALITY. With an estimated average of 46 per 1000, Africa has the highest crude birth rate in the world. Although the fertility rates are the highest in the age groups of 20-24 and 25-29 (*Demogr. Handb. Afr.*, '71, 71-3), we have to consider at the same time the high rates of fertility among the very young age group of 15-19 and the older age group of 35-49. *Pradervand* ('72-73, 319-20 bis) illustrates this by comparing fertility rates per age group (= age-specific birth rates) of some West African countries with those of countries outside Africa.

The datum of the average birth rate is rather meaningless because it obscures the FERTILITY DIFFERENTIALS, which are found both at national and regional level (*Coale & Lorimer*, '68, 162; *Clairin*, '69, 762-3; *Podlewski*, '66, 173-5). Some interesting case studies have been carried out in relation to the possible reasons behind the differences. *Hurault* ('70, 1039-44), for instance, relates the diversity of fertility rates among the detribalized nomadic Fulbe and the tribal cultivators of the Adamawa hills in Cameroun to their different opinions about marriage stability, resulting from the impact of slavery on conjugal fidelity. The direct cause behind infertility in this area, is the high frequency of venereal diseases. In a case study on the Nyakyusa of Tanzania (*de Jonge*, '71), the observed fertility differentials are directly related to marriage mobility, the frequency of polygamy and the observance of sexual taboos, whereas migration and mortality are considered as indirect factors. *Henin* ('72) adds another dimension to differences in marriage customs and therefore to fertility differentials, by including economic considerations in the analysis. Settled cultivators in the Sudan have higher sex-ratio's and show a higher degree of marriage stability than the traditional rain cultivators, who experience an outflow of adult males to more developed areas (78-80). Socio-economic and demographic factors, rather than cultural ones, influence differentials among Ghanaian tribes. While members of

both patrilineal and matrilineal societies express the wish for large families, an interplay of factors, such as sterility, malnutrition, seasonal migration and long-term migration, determines the inter-tribal fertility differentials (*Gaisie*, '72, 88-90). A thorough study about fertility variations in the Congo has been undertaken by *Romaniuk* ('67), who examined, after an analysis of the regional, ethnical and periodical variations in fertility; the social, cultural, and medical conditions which influence procreation. Fertility, according to *Cohen* ('67, V-7/50), is influenced by biological factors, such as sterility, caused for instance by diseases, as well as by behavioral factors, such as age of marriage, marriage stability and polygamy.

In considering the age-specific DEATH RATES for the different countries in Africa, we find high rates of child mortality, after which mortality drops to the lowest at the age 10-14, and then rising gradually again to the highest rate at the last age (*Demogr. Handb. Afr.*, '71, 94-5). *Clairin* ('68, 199-200), after presenting crude data on infant mortality (0-1) and child mortality (1-4) in Upper Volta and Chad, relates the high level of child mortality in Africa to weaning. *Cantrelle* ('71, 105) and *Cantrelle & Leridon* ('71, 521ff), however, point out that nutritional deficiencies usually set in earlier than at the moment weaning starts.

Rates of mortality and infant mortality too, vary at national as well as regional level. (*Blayo*, '67, IV-11/12, IV-18/19; *Cantrelle*, '71, 96-7, 100-1; *Decogr. Handb. Afr.*, '71, 89-91). Besides, there are periodical differences, as observed by *Cantrelle a.o.* ('69, 51-4), which are related to ecological conditions, such as distribution and quantity of rainfall, and therefore to the occurrence of infectious diseases and malnutrition.

In surveying the causes of death in francophone Africa, *Cantrelle* ('67) draws a distinction between direct causes, such as accidents and diseases (VI-19/34) and indirect causes, such as age and sex (VI-34-8) and ecological conditions. These ecological conditions include physical as well as human environmental factors (VI-38-55). If the differences in fertility are due to involuntary factors, fertility will in future rise in the low fertility regions to the higher levels observed elsewhere (*Henin*, '71^a, 19).

It seems likely that the rate of POPULATION GROWTH, estimated at 2.6 per cent per year during 1965 to 1970, will increase to 2.8 per cent from 1970-75, and to 3.0 per cent from 1980-90, which will be the highest rate of growth in the world. (*Lee*, '72, 11). Opinions differ as to the kind of factors which will influence the prospective patterns and trends of fertility in Africa (*Romaniuk*, '69, 739-50). Whereas some authors expect a decline in fertility as urbanization and education progress (*Caldwell*, '69^b, 753 ff; *Ohadike*, '69, 805 ff), others like *Olusanya* ('69, 813 ff) and *Henin* ('69, 799) believe that these factors of modernisation will stimulate population growth. If the pessimists are right in this, one will encounter rates of fertility which will seriously affect some crucial sections of the population, namely the children of school-age and the adults in the labour force (*V.d. Walle*, '70, 262; *Lee*, '72, 16-7). As a result of this, the dependency ratio, which is the proportion of persons at the age of 0-15 and 65 or older, dependent on the working-age group of 15-65, will increasingly turn out negatively, especially in those places where unemployment and shortages of capital predominate (*Pradervand*,

'72-73, 358-9). *Condé* ('71), outlining four stages of demographic transition (43-4, 107), projects Africa at the beginning of the third stage, which is characterised by high fertility rates and declining mortality rates.

II. *The relationship between demographic and economic factors*

The problem of economic implications of demographic growth has been approached from various sides by different groups of investigators. Generally three groups can be distinguished, viz. the theorists, the providers of projections, and the adherents of the school of the cost-benefit analysis.

THE THEORISTS' observations about the relationship between population and economic growth have often lost clarity by generalization (*Prest*, '65, 1-5). *Meilink* ('72) has summarized the opinions about this question, as shared by classical economic writers as well as by modern development theorists (1-5). Besides, he has examined the correlations between a number of economic variables and changes in rate of growth of the population, age composition, and distribution of the population (5-11).

The project group 'Demografie van de ontwikkelingslanden' ('73) has reviewed the prevailing opinions about the positive or negative effects of population change on economic growth. They refer to the optimists, for instance, *Boserup* and *Clark*, who believe that population growth could be beneficial to socio-economic development (11-20), and to the pessimists, for instance, *Enke*, *Coale & Hoover*, who postulate that fertility control is a necessary measure to attain economic growth.

Amin ('72^a) adopts a more political point of view. He interprets underdevelopment as a consequence of an over-emphasizing of the export-sector in developing (peripheral) countries. In his opinion, this undue preference for the export-sector arises from the intention to stimulate economic growth in the capitalistic central regions. Unemployment and proletarianisation in the peripheral countries create the false impression, that these are underdeveloped because of overpopulation (62 ff).

Some investigators provide PROJECTIONS, in order to predict the implications of population growth for economic growth. *Sauvy* ('72) has calculated the expenses of housing in case of population growth (13-8). On the basis of costs of land cultivation in Sudan, *Henin*, ('71^b) has estimated the magnitude of future investment in agriculture required to satisfy the labour supply, respectively under a low, a medium, and a high population projection (31-4). Most man-power studies are based on projections of population trends and potentialities of economic growth.

Adherents of the COST-BENEFIT ANALYSIS, namely *Enke* ('66), *Coale & Hoover* ('58) and *Demeny* ('65), calculate the economic benefits of population control. A useful review of other models, which incorporate various important economic-demographic relationships, is given by *Hoover* ('71).

When analyzing the precise inter-relation between demographic and economic variables, one has to realize that figures on economic growth, as measured in terms of increase in gross domestic product (GDP) and GDP per capita, only provide an indication of the development potential. Improvement in the conditions of poverty, unemployment, and inequality, on the contrary, are indicators of actual development (*Seers*, '72, 24), which, however, need to be carefully measured by region,

race, income, etc. (28-9). Clower ('66, 31) too, emphasizes that economic development involves more than economic growth, and that it implies, for instance, institutional improvements, such as more and better government services, higher levels of education and skill, and the transformation of subsistence agriculture. Due ('73) has attempted to verify the hypothesis that development exceeded growth in Ghana during the 1960s (14), on the basis of indices of changes in some components of social welfare sector, the industrial sector, and the agricultural sector (4-12).

In view of the fact that at present the bulk of data on the economies of the African countries are characterized by broad estimates of economic growth, the following literature refers to variables, which only measure economic growth.

The growth rate of the TOTAL GROSS DOMESTIC PRODUCT of developing Africa, which was 4.4. per cent between 1960 and 1969, remained below the 5 per cent target, set for developing countries during the U.N. First Development Decade (*Survey of Econ. Cond. Afr.*, '71, 21). Although this growth in itself is not extremely low, one has to realize the moderate growth of GDP in the various sub-regions and countries (22-5). Recent data on the growth rate of GDP, which has 5.5. per cent for all sub-regions together in 1972, give rise to optimism, but here again, the average obscures wide regional differences (*Stat. and Econ. Inf. Bull. Afr.*, '73, 1-2). *The Stat. Yearb. of the U.N.* ('72, parts 1, 2, 3, 4) gives figures on the sectoral contribution to GDP per country. If one compares the gross national product (GNP) per capita of the rich countries with Africa, one sees striking contrasts between both groups of countries, as well as wide differences among the African countries themselves (*World Bank*, '73, table 1.4). Although such data provide a broad insight into the economic situation in a country, they do not inform us about local differences in economic growth and development. For an adequate analysis of the actual situation, more data on the micro level, namely the village and the region, and on the specific sector of the economy, are required. In this context, one has to search for factors which bring about inequality (*Seers*, '72, 28 ff).

The lack of micro data on economic growth and development, is one more reason not to take economic consequences of demographic growth for granted. Even the macro economic studies do not show a general relationship between demographic and economic variables. *Tabah* ('69, 535) concludes that the standard of living in the third world cannot be improved by demographic measures only. In his opinion, demographic measures are useful if savings increase and investments are allocated more efficiently at the same time (522 ff). One of the few micro studies, which has attempted to measure the effect of increased numbers on economic growth, has been undertaken by *Biyong* ('71). He has demonstrated for 6 regions in Cameroon, that there is no correlation between population growth and the overall agricultural production (2-7). In his opinion, even in the industrial sector, there is no clear correlation (7-12).

The gross domestic capital formation (GDCF) in a country forms an indicator of the proportions of resources available for CAPITAL INVESTMENT (*Accra*, 16). Growth rates of GDCF varied among the subregions of Africa during 1960-69 (*Survey of Econ. Cond. Afr.*, '71, 237-8). Besides, figures on GDCF in 1960 show

considerable differences among the individual countries (235-7). The fact that 16.8 per cent of the net resources went into GDCF in Developing Africa in 1969, means that the target set by U.N. was missed by 3.2 per cent (*Survey etc.*, '71, 31).

The greater part of investment resources is generated from SAVING in the public sector, from savings by domestic private enterprises, and by direct investments by means of foreign public or private capital (*Accra*, 38). Saving in the subsistence sector, which includes the majority of the population, is negligible, since this sector is hardly monetized (*Van de Walle*, '68, 362). Capital investment is largely determined by the international climate and the viability of major domestic industry and agriculture, rather than by the population factor (*Accra*, 38).

The ALLOCATION OF INVESTMENT RESOURCES, on the other hand, may be adversely affected by population growth. *Herzog* ('72), in his observations on investment and its role in socio-economic development, points to the impact of rapid population growth on the redistributive effects of social investment projects. He wonders how far the costs of the projects are distributed in the same way as the benefits, with a view to redistributing income and welfare among the different groups (12-3). According to *Kantner* ('71), the differential growth in the economic sectors of Tanzania, has been caused by the selective allocation of the available investments.

When considering the MAN-POWER SITUATION in Africa, one sees that 176 million persons, out of the total population of 340 million, were of working age (15-59) in 1970 (*Survey Econ. Cond. Afr.*, '71, 158). Although the percentages of the male population which is economically active varies amongst the individual countries, the main differences are the female rates of economic activity in the different countries (*Demogr. Handb. Afr.*, '71, 110-2). This may be due to cultural factors, as well as to the differences in the definition of certain economic activities of women (108). Age specific activity rates are high for males in the early and the old age-groups, whereas in the middle age-groups the rates are comparable with those of non-African populations in Africa (109, 113). *Addo* ('67) has described the regional differences in the age-sex pattern of employment in Ghana, and has examined how far factors as school attendance, length of working life, and marriage rates affect the activity rates (7-22).

When analyzing the effect of population growth on the evolution of the labour force in the future, one has to make a distinction between the natural increase of the labour force, which reflects the natural increase of the population in working ages, as determined by the level of the birth rate in the past, and the actual growth of the labour force, which is determined by factors such as changes in activity rates of migration (*Durand & Miller*, '69, 1500-5). In Africa, the number of persons engaged in the labour force, aged 15 tot 65, increased from 114 million to 127 million during the period 1965-70, which means a growth rate of 2.1 per cent a year (*Survey Econ. Cond. Afr.*, '71, 158). The labour force participation for all age groups, however, has steadily decreased since 1960, because the proportion of the young at school has increased significantly (159), whereas old age pensions introduced in some places influenced the participation of the older age categories in a downward direction. The *International Labour Office* projection ('71) show an increase of the total labour force in Africa with 25 per cent from 1970

up to 1980. By contrast the active labour force will fall from 38.5 per cent in 1970 to 36.2 per cent in 1980. (*see also: Denti, '71*). In other words, the active population will increase at a slower rate than the total population (*Ho, '71, 17, 26*), which means that increasing social welfare charges must be paid by a decreasing number of employed persons.

The magnitude of UNEMPLOYMENT forms a useful indicator for an economy's ability to absorb effectively the labour supply (*Accra, '71, 27*). *Condé & Herzog ('71)* conducted a thorough analysis of factors, which will affect the future supply and demand of labour in Africa. Their forecasts of the supply of labour are derived from the expected rates of growth of the real product in the different sectors of the economy (23-33). Their projections of the demand of labour are based on forecasts of output by sector, which is determined by the demands of goods, the price of imports, the level of technology, and the rate of capital formation (55-79).

Frank ('68), in examining unemployment in the modern urban sector, believes that neither wage-rate reductions nor the implementation of more labour-intensive techniques will diminish urban unemployment (262-7). In his opinion, the supply of urban workers will decrease if one attacks the evil at its roots, namely the rural-urban income differentials (270-1).

Callaway ('69) has paid attention to the specific problem of unemployment among primary school leavers in Africa. (237 ff).

For most of the African countries, agriculture absorbs more than 80 per cent of the economically active population (*Gormely, '70, 473*). Only a small percentage of the total population is engaged in wage employment (*Survey Econ. Cond. Afr., '71, 341*). A transformation of employment in the agricultural sector to the non-agricultural sector will be delayed in the long run, because the rate of growth of non-agricultural employment will not keep pace with the rate of growth of population (*Gormely, '71, 472 ff*). This will lead to a serious stagnation in agriculture production and employment, provided that there is no development of the agricultural techniques.

III. *The man-land relation*

In spite of the fact that the share of agriculture in GDP has been decreasing in Africa in the 1960s (*Accra, 13*), partly because of growth in the other sectors, and partly as a result of the slow growth in this sector itself (11), data on the sectoral origin of GDP indicate that agriculture still contributed the largest share of the GDP in 1969 (*Survey Econ. Cond. Afr., '71, 26-9*). Although figures on per capita agricultural production and food production show that these can hardly keep pace with the population growth (FAO, *Production Yearb., '68, 27-32*), one does not find a consensus of opinion about the impact, whether positive or negative, of population growth on agricultural production. An old theory, that of the tendency of 'everything else remaining equal', as shared for instance by Sauvy, started from the principle, that a constant increase of labourers would cause diminishing returns (*Van de Walle, '72, 119*). Herewith, however, one overlooked the fact that additional labour itself may result in a change of the supply or quality of the other factors of production, namely those of land and capital (119).

Field studies in later years have proved that in some places increasing population densities have contributed to a SPECIALIZATION OF AGRICULTURAL TECHNIQUES. *Grove* ('61, 115 ff) came to this conclusion in his comparison of the agricultural systems of four areas in northern Nigeria. *Gleave & White* ('69), refer to a number of case studies in West Africa and describe in which cases population growth did not only affect agricultural techniques and land-use patterns, but systems of land tenure as well (273-88). *Boserup* ('65) goes very far in this respect by maintaining that population pressure forms a precondition to technological, social and economic changes within the subsistence sector. This view has been underlined by *Clark* ('67). It was accepted, for instance, by *Badouin* ('66), but denied by most of the others. *De Wilde* ('67), points to the fact that there are as many examples of unsuccessful attempts at adaptation as successful ones. In case of successful adaptation, the intensification of agricultural techniques simply leads to a stabilization of the incomes at a very low level (81-2). Besides, land-use practices are not only determined by the supply of land, labour, and capital, but also by ecological conditions, marketing opportunities, technology, and structure of authority. As a result of this complexity of land-use practices, population growth will only have a partial impact on its changes (*Mortimore*, '71, 10).

A quite different point of view is adopted by those who see absolute limitations in the environmental potential. The problem has been discerningly defined by *Allan* ('65), who has put forward the concept of CRITICAL POPULATION DENSITY. This concept refers to "the human carrying capacity of an area in relation to a given land-use system, expressed in terms of population per square mile, or the maximum population density the system is capable of supporting permanently in that specific environment without damage to the land" (89). Estimates of carrying capacity, carried out for instance, by *Allan* ('65) for the various land-use systems in eastern and central Africa (86 ff), are difficult to judge at their true value, because they do not involve, among other things, the factors of soil fertility, the amount of land suitable for cultivation, or the nutrient requirements of the cultivated crops (*Benneh*, '70, 76). Besides, the observations only concern the low level types of farming (*Hance*, '71, 19). Nevertheless, these studies, which were developed in response to vague definitions of the concepts of over-population and under-population (see also, *Singer*, '64, 243-4; *Hance*, '71, 18 ff), are worth being followed up in a more precise manner, because they call attention to areas with growing shortages of land. Although general pronouncements about land capacity are made, for instance, by *Boutillier* ('71, 79) for the Ivory Coast and by *Boateng* ('72, 163) for Ghana, detailed studies in this field are scarce for Africa. *Moore* ('71) who has calculated the total land requirements for 100 households per district in Tanzania (25-40) concludes, on the basis of the obtained population-land ratios (41-6), that, although there is a surplus of land in overall Tanzania, there are over-populated areas too, which are not necessarily the most densely populated ones (4). *Cunningham* ('69), who emphasizes the impact of ecological conditions on the agricultural output, touches also the problem of the carrying capacity of land in Tanzania, however, with a much less methodological approach than Moore. Land-use surveys, started by *Thomas* ('70^a; '70^b), respectively in the districts of North Pare and Morogoro in Tanzania, were aimed at measuring the

agrarian population density or the ratio of persons to arable land and to cultivated area, at which the important yardstick of the intensity of land-use was applicable. ('70^a, 13-22; '70^b, 24-38). The present writer ('67) has attempted to measure the land capacity for the district of Man in Ivory Coast.

Another category of investigators considers the views about demographic growth and resource development, as referred to above, as too static and too much expressed in terms of agriculture. *Pradervand* ('72-73), for instance, advocates a wider interpretation of the term demographic pressure and distinguishes the relative or temporary demographic pressure from the absolute pressure. In his opinion, demographic pressure very often means UNDERDEVELOPMENT, which is determined by the structure of the international market, the nature of technical assistance, the capacity for industrialization, and so on (431-2). *Van de Walle* ('70), too, does not a priori consider the problem of population density in its relation to a given land area, but rather in its relation to reproducible capital, research and educational facilities, leadership, channels of diffusion, and the entrepreneurial class (265). Problems of land tenure, transport, marketing, and inadequate farming practices in Ghana, have arisen from a many years' neglect of the agricultural production for local use. In fact, the government policies in Ghana in the past, were highly directed to a one-sided development of the external export sector (*Boateng*, '72, 158 ff). *Van de Walle* ('70), evaluated the various ways in which the future population surplus might be absorbed, such as cash-cropping, the development of resettlement schemes and industrialization. He concluded that all those strategies miss the solution of the essential problem: the UNEMPLOYMENT OF THE RURAL MASS (267-71). *Yudelman* ('64) too, has been engaged in the question of how to raise the productivity of both land and labour in African agriculture (562-81). After highlighting the problems of seasonal labour bottlenecks and chronic underemployment on the land, *De Wilde* ('71, 368-71), suggests some remedies to improve both employment opportunities and living conditions in rural areas (374-81). *Roch & Rocheteau* ('71, 64-5) and *Forde* ('72, 325-6) touch the problem of rural underemployment, respectively in Senegal and Sierra Leone, which is related to the seasonality of the agricultural activities.

In examining the effectiveness of various mechanization programmes in East Africa, and their income and employment impact, *Clayton* ('72, 309 ff) concludes that mechanization may be useful in places, but uneconomic elsewhere, especially when it gives rise to a low employment absorption and labour displacement.

The employment situation in Kenya differs for the sectors of small scale agriculture, the plantation agriculture, and the large mixed farming (*Gwyer*, '72, 23 ff). He suggests different types of policy for job creation in each of the sectors. *Clayton* ('70), in examining which of Kenya's agricultural policies have had the greatest effect of labour absorption (438-43), pleads for an intensification of private small holdings, which, however, requires a thorough rural development strategy (444-53).

IV. *Population movements*

The complicated phenomenon of migration has been analysed in the course of time by criteria, which vary so much, that the differentiated FORMS OF MIGRATION

are more important from a theoretical than from a practical point of view (*Diop*, '65, 72-3). *Prothero* ('68, 252-4) thinks in terms of the length of time of absence of the migrants from their home areas and makes a distinction between seasonal, short-term, and permanent migration. To *Hance* ('70, 166-91), the motivations for migration arising from environmental, socio-cultural, political, or economic conditions, form the basis of classification. *Gulliver* ('60), on the other hand, stresses that the level of economic development, in the home area as well as in the destination area, determines the character of labour migration in Africa. Finally, one may distinguish, on the grounds of the geographic distribution of source and destination areas; the rural-rural, the rural-urban, the urban-urban, and the urban-rural types of migration (*Hance*, '70, 162). All these forms of migration are overlapped by two main categories: the labour migration and the non-labour migration. Both labour and non-labour migration may arise from pressure on land and is called, for that reason, the demographic factor in migration (*Hance*, '70, 171-2). *Hance* (70) describes examples of this kind of migrations in 15 areas of Africa (173-6). Whereas non-labour migration assumes the character of permanent migration, labour migration is mostly of a semi-permanent nature. Labour migration, according to *Elkan* ('67), eventuates in circular movements in many cases, which he explains by the lasting ties of the migrant with the village of origin (581 ff).

Although a number of migration studies is devoted to spontaneous or forced population resettlement in rural areas (*Gleave*, '65; *Hilton*, '60; *Berry*, '72; *Raison* '72), the real significance of non-labour migration studies is, for some reasons, overshadowed by studies devoted to rural-urban and rural-rural labour migration (*Colson*, '60, 61-2).

In exploring the CAUSES OF LABOUR MIGRATION, the 'push and pull' theory has been popular for some time. Push factors are associated with the area of origin, and pull factors with the destination area (*Lee*, '66, 49-52). This theory has been criticized, for instance, by *Mabogunje* ('70^a) who objects to the linear interpretation. In his opinion, migration is a dynamic process, which is subject to stimuli from the environment, upon which a complex of institutions and relations interacts, which are rural and urban as well as economic and social (5 ff). *Caldwell* ('69^a) adopts the point of view that push and pull factors overlap each other in the urban destination, as well as in the rural source areas (117). For life in town offers advantages, such as higher wages, as well as disadvantages, such as unemployment and high cost of living, whereas rural life too shows both advantages and disadvantages (88-103). Also according to the migration model of *Mitchell* ('59, 20 ff), the centrifugal or push factors and the centripetal or pull factors, are found side by side in urban as well as in rural areas.

In classic and modern works on migration, the importance of ECONOMIC CAUSES has been discussed. *Caldwell* ('68^a) stresses the interrelation between economic and other factors. He explains how the education factor may reinforce the economic motivation, while the education factor itself may have an impact on the sex- and age differentials in migration (375-6). *Mitchell* ('59) believes that economic motives are decisive only when socio-psychological circumstances lead to the ultimate decision (32). Although limited to one area in the former Tanganyika, *Gulliver*

('55) has made observations in this field that still hold true today. He highlights the economic necessity to migrate (25-7) and considers factors such as family quarrels and adventurism as being second-rate (28-31). Both writers have been criticised by *Gugler* ('68), who believes that the personal motives for migration have been over-emphasized. (471-2). *Amin* ('72b) concludes that, by emphasizing the personal motives for migration, the essential causes, namely those which arise from a policy which implies social and economic inequality, are spirited away. He considers migration as a result of marginal integration into the capitalist sector (38-46). Unfavourable socio-economic conditions in a Senegalese village, have been hold responsible by *Ravault* ('64) for the outflow of men from an area, which is under-exploited and inaccessible for a great number of outcasts, because of a rigid system of land distribution (58 ff).

The views of migration specialists concerning the EFFECTS OF MIGRATION for the rural expulsion areas, differ widely. *Berg* ('65), who weighted the positive effects against the negative ones, is optimistic in this and questions even the often-mentioned long-term depressive effects, which arise from the fact that migration does not promote the development of agricultural techniques (177-8). Regional mobility, according to *Mabogunje* ('72), opens new perspectives for developing agricultural techniques and for diffusing institutions, ideas, and material goods (81-114). *Hill* ('63) has described how the cocoa industry in Ghana has been developed by successive migrations of entrepreneurial cocoa farmers. Although admitting that effects of labour migration are not easy to isolate from effects of other forces, *Skinner* ('65) holds the firm conviction, that migration has had a negative impact on the existing agricultural practices and types of cultivated crops of the Mossi (69-71). He has also pointed out the disturbing influence of migration on the social- and political system of the Mossi (*Skinner*, '60, 388-97).

Van Velsen ('60) concludes that the kind of effect, whether in the economic sphere or otherwise, is strongly determined by the specific economic and social organization of the societies concerned (269). Results of a study on the Tonga, make him optimistic about the continuity of the reciprocal contacts between town- and village dwellers, which, in his opinion, is often to the benefit of the migrant's own social and political status (*Van Velsen*, '60, 271-6). *Addo* ('70) has given a more concrete status to the question of migration and its impact on economic development. In order to analyse the effects of labour migration on the regional differences in socio-economic development in Ghana, he has explored the levels of employment of migrants and non-migrants in urban and rural areas; the distribution of the migrant labour force over the various types of industry; and the occupational structure of the migrant labour population (107-26). *Hill* ('70), in a statistical survey on occupations pursued by Ghanian migrants, warns against an underestimation of the number of non-wage-earning occupations of migrants, for instance, those of farming and trading (14 ff).

Interesting perspectives for future research are presented by studies, which are focussed on the ECONOMIC ASPECTS OF THE MIGRATION PHENOMENON. The question to what extent the income differentials are determining specific migration movements, has been considered from various angles. While *Okun & Richardson* ('61) adopt the point of view that migration flows occur from stagnant regions, where

little or no increase in per capita income is found, to growing regions, with a continuous improvement in per capita income (132 ff), *Mabogunje* ('70b) thinks that this movement depends on the degree of development in a country. In Nigeria, with an abundance of unexploited frontier areas, migrants may move from the high income areas to the low-growing frontier areas, because of population pressure, the higher level of expectations, and feelings of competition in the income-growing areas (245-7). *Colson* ('60) has found that after an initial flux of population into the new cash-crops areas, there is an outflow after some time from these areas to wage labour areas because of shortages of land (65-7). Although admitting that income differentials are responsible for rural-urban migration, *Knight* ('72) warns against the acceptance of a causal relation, before one has gained insight into the complex factors, which determine the supply price of the migrant in the rural area. The supply price is closely bound up with the existing income pattern in the rural areas, and with the level of urban income. The latter is largely determined by the migrant's level of education, his length of stay in the town, and his type of employment (204-6). According to *Todaro* ('69), not only the urban-rural income differentials have an impact on the decision to migrate, but also the probability to obtain an urban job (139). In this case, the migrant risks unemployment for a certain period, while he is expecting an urban income in due time. Even if the expected urban real income is less than the rural real income for that period, it may still be economically rational from a long-term point of view to migrate (140 ff). This explains the paradoxical fact that migration continues, despite the increasing rate of urban unemployment (*Todaro*, '71, 391-5).

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MR. P. A. EMANUEL

Mr. P. A. Emanuel, my co-editor of the *Kroniek van Afrika* until this issue, has from now assumed the position of chief of the library and documentation department of the Afrika-Studiecentrum. For that reason he has left the editorial committee of this journal. I should therefore like to express my gratitude for the pleasure of having worked with a man of his insight and erudition. I am certain that others will in future also profit from his knowledge of the written word about Africa.

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A film by Emile and Els van Rouveroy van Nieuwaal

Camera: Emile van Rouveroy van Nieuwaal

Sponsored by: Netherlands Foundation for the Advancement of Tropical Research (WOTRO), The Hague

Edited by: Rob Warning, The Foundation for Scientific Film, Utrecht

Available in English and French

Produced by: Afrika-Studiecentrum (ASC)

Documentation: 'Mbambim un chef de famille d' Ayikpèrè', pp. 32, published by ASC, 1973.

This film was made during field research among the Tyokossi (North Togo) concerning some aspects of customary law and dispute settlement in Sansanné-Mango.

Two other films are forthcoming in 1974: one about two aspects of the Islâm (Arab writing and prayer) in Sansanné-Mango; another dealing with dispute settlement at the court of the Tyokossi Paramount Chief.

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