Foreign Financial Assistance and Economic Growth in Zaïre

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I. INTRODUCTION.

1. - *Need for financial assistance.*

It is well known that the foreign presence has been the single most important determinant factor in the process of birth and transformation of the Congo, today Zaïre, as well as in the process of modernizing its people and its institutions (1).

One aspect of this transformation process has been the organization of the economic life of the country under foreign rule, initiative, direction, with foreign capital (both technical and material). This transformation was systematically (2) initiated in the context of the Berlin Agreements of February 26, 1885, which created the Independent State of the Congo, and pursued in the context of the pure Belgian colonial empire inherited from Léopold II in 1908 (3).

The Zaïrian economy, as a legacy of direct foreign rule (theoretically ended on June 30, 1960), presented, in 1959, the following features.

— GDP (in thousands of US $)	1,282,000
— Population (in thousands)	13,789
— GDP per capita (in US $)	93
Principal components of GDP as % of GDP	
— Mining and metal products	32
— Agriculture	30
— Manufacturing and Energy	20
Level of autofinancing, more than	50 %
People directly concerned by modern sector as % of the Zairion people	7.9
Degree of dependence on external trade (as % of GDP)	61

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Sources : — GDP and components : Banque Centrale du Congo Belge et du Rwanda-Urundi, Bulletin mensuel des statistiques générales, 1959.
— Population : Romaniuk, A. ; Tableau général de la démographie congolaise, enquête démographique par sondage 1955-57, Louvain, 1961.
— Finance : Commission d'Etude interuniversitaire : La Belgique et l'aide économique aux pays sous-développés, IRRI, Bruxelles, 1959.

Rate of conversion : 1 US $ = 50 BF.

Although these indicators cannot adequately describe the whole picture of the zairian economy in 1959, they reveal, however, two important characteristics of that economy.

First, they reveal the nature of the colonial organization of the zairian economy, which consisted of a small and marginal sector of modern economic organization ; small and marginal with respect to great mass of the zairian people, of whom only a small minority were directly concerned (9.4 % of the zairian people in 1955, 7.9 % in 1959) (4), and a large semi-subsistence economic sector based upon traditional african mode of production.

While the economic literature calls this juxtaposition of two different modes of economic organization « dualistic economy », it does not emphasize enough that whatever the origin of the one and the other modes of economic organization in existence, they constitute the way the colonial powers organized the economic life of their respective colonies. As such, the persistence of the traditional african mode of production also constitutes a legacy of colonial rule. This observation reveals the fact that the transformation and structuration of the colonial dualistic economy into an unified economic system was not among the major objectives of the colonial undertakings, at least in Africa.

Second, the indicators reveal that the modern sector of the zairian economy is dependent on foreign factors. An open economy, whose external trade is the most important single determinant element (61 % of GDP in 1959), the zairian modern sector depends, both in its organization and initiative, on the foreign presence. Any significant development of this sector implies, among other things, both the injection of fresh capital from abroad (whatever form it may take) and the technical assistance that obligatorily follows this capital.

It is obvious that the level of autofinancing has been high in Zaire : more than 50 % of the private investments have been financed from local resources (5) ; it is also obvious that in the absence of a local capital market, this autofinancing process has led to a disparity of economic development : it has played its full role in the sector from which it originates (the export sector, especially mining, metallurgy, and the related activities, and large export oriented agricultural enterprises). Its impact is almost nil in the domestic - market oriented sector (manufacturing industries and crops for domestic consumption) (5).

René de Schutter argues that, in spite of the high level of local autofinancing, external financial aid is necessary for Zaire for many years to come (6). When one looks at the overall flows of investments and savings during the colonial period, the validity of Schutter's conclusion becomes clear :

TABLE I

INVESTMENTS AND SAVINGS DURING THE COLONIAL PERIOD (1950-1957, IN MILLIONS OF BELGIANS FRANCS)

	1950	1951	1953	1955	1956	1957
State gross fixed investment	1.250	2.500	3.380	4.630	4.940	5.800
Gross fixed invest. of parastatals ..	1.000	1.810	3.390	2.340	1.890	1.390
Gross fixed private investments	5.260	6.760	9.500	8.720	9.510	9.230
Variation of stocks	200	2.180	— 570	1.400	2.100	2.500
Lending to the rest of the world	3.050	2.370	— 1.700	— 2.070	— 3.360	— 7.230
TOTAL	10.760	15.670	14.000	15.020	15.060	11.690
Individual saving ..	1.030	1.820	1.450	1.840	2.300	1.390
State saving	1.860	3.330	3.480	3.290	2.940	3.640
Enterprise saving..	7.870	10.520	9.070	9.850	9.820	6.660
TOTAL	10.760	15.670	14.000	15.020	15.060	11.690

Source : La Belgique et l'aide économique aux pays sous-développés, I.R.R.I., Bruxelles, 1959, p. 233.

While the internal saving successfully covered the internal investments and generated a surplus lent to the rest of the world in 1950 and 1951, due without doubt to the favourable terms of trade of copper during the hardest years of the Korean war, the situation was reversed in the followings years. It even worsened in 1957, where the fall in the terms of trade of copper led to a significant deficit in the balance of payment (7 billions of Belgians Francs), which corresponded to the external disinvestment or borrowing. Indeed, with 1949 = 100, the terms of trade index of copper, after having reached 150 in 1956, fell to 114 in 1957, causing the deficit above (7).

The main point to be made about Table I seems to be that, as huge investments are undertaken, a trade gap develops, whatever the balance of internal savings and investments. And it grows faster as the terms of trade of copper worsens.

Given these conditions, the pursuit of economic development aimed at satisfying minority needs requires, either increased receipts from

the export sector, or increased financial flows from abroad. While increased receipts from the export sector requires the diversification of export commodities and services, coupled with favourable terms of trade for each export product (a possibility which is far beyond the limited capacity of that economy), it was the last alternative, increased financial flows from abroad which remained the unique and realistic solution adopted by Zaire from 1952 to 1957.

Granted that the 1970's zairian context is somewhat different from that of 1957, still, no fundamental change has taken place with respect to basic social choices, the general economic conditions existing then and which led to the above conclusions are still present today. The diversification of the export sector is still a hope for the future (the export sector has become even more concentrated on very few items than was the case in 1957 : the mining sector provided 72 % of export sector receipts in 1972 as against 57 % in 1957). Therefore, the conclusions above are even more valid today.

2. - *Objective, scope and approach of the study.*

The object of this study, however, is not to analyse the relationship between investments and economic growth in Zaire. Its purpose and scope is rather much less ambitious than this. Using saving and trade gap analysis formulated in their simplest manner as tools, the study tries to analyze the following practical problem : given a target annual average rate of growth of Gross Domestic Product (GDP) of 6% between 1971-1980, how much of foreign financial aid is needed, if any, to achieve it ? (8).

Saving and trade gap analysis belong to the theory of development which, although recognizing the complexity of this phenemena, asserts however that, in a given time period and for a given rate of growth, some specific bottlenecks in various economic inputs may appear which not only may impede the achievement of the desired and expected rate of growth, but may also lead to the underutilization of other available inputs. Under these conditions, to use national resources rationally, foreign aid may be revealed as being of critical utility. This is what Chenery and Strout affirm, when they say :

« A country setting out to transform its economy without external assistance must provide for all of the requirements of accelerated growth from its own resources or from imports paid by exports. Success thus requires a simultaneous increase in skills, domestic saving and export earnings as well as an allocation of these increased resources in such a way as to satisfy the changing demands resulting from rising levels of income. The attempt to increase output can be frustrated by failure in any one of these attempts, even when the others have been quite successful. When growth is limited this way by a few bottlenecks, there is likely to be underutilization of the other factors such as labor, natural resources, and specific types of productive capacity. By relieving these constraints, foreign assistance can make possible fuller use of domestic resources and hence accelerate growth » (9).

One of the very important assumptions underlying this approach is that the recipient country has taken all the required measures to insure the full participation of foreign aid in its economic programme, including the provision of all non-economic inputs that cannot reasonably be expected to be provided from abroad. This assumption puts a serious limitation to the effectiveness of this approach. For, in some cases, and these are not rare, the critical factors that are lacking in a given time-period are of non-economic order, such as the social basic choices in favour of the majority and the consequent social institutions and allocation of socio-economic resources, which are political factors.

The limitation of the effectiveness of this approach does point out the need for identification and provision of the right input at the right time. To provide economic input where political input is needed may correspond to the waste of scarce resources.

The hope that the provision of economic stimulus (no matter how meagre) and the attendant growth rate (satisfactory or unsatisfactory from the stand point of the aid-giving country) may sooner or later lead to satisfactory growth bears on the second best theory. It is based upon the assumption that, during and along the process, a possible growth rate allowed by the existing conditions may generate, little by little, the necessary conditions for further satisfactory growth. But the resources generated by this rate of growth may be so little in comparison with the level of aspiration and demand put on the system that, given the income distribution mechanism in the country, it may cause or occasion the emergence of social disturbance, instead of being of the nature of appeasing social tensions. The hypothesis that a certain rate of growth of the economy may lead to the improvement in the management of the society must be considered with caution. Often, the resulting situation may even be worse. To defend the existing value system and income distribution pattern, the coalition in power may have recourse to fascist and dictatorial methods, whose substance may be a deliberate mismanagement of the society from the point of view of the majority.

At this point, an analysis of the country's basic social choices becomes indispensable. In order to appreciate the usefulness of foreign aid with respect to economic development of the country, one must ask whether it is majority or minority needs, people or elite needs that are to be served. In effect, it is this choice which determines and explains, largely, the nature, objective and function of socio-economic structures and institutions in the country, and the way the allocation of socio-economic resources, including foreign aid, is being made.

The choice of majority needs, because it implies, among other things, active participation and involvement of the people in socio-economic undertakings as well as benefits, and rational allocation of available and potential socio-economic resources, including foreign aid, leads to a dynamic expansion of the indigeneous market, which constitutes an important step in the process of building a relatively autonomous national economy.

On the other hand, the choice of minority needs, by confining the country's socio-economic activities and benefits to minority interests, implies exclusion of the people and misallocation of socio-economic resources, including foreign aid. Under these conditions, socio-economic undertakings are anti-development oriented, in the sense that they do not address themselves to a development of an indigeneous market and, consequently, to the process of building an autonomous national economy.

It is argued that the choice of present zairian leadership is for minority needs. People are completely excluded from any meaningful participation in the existing socio-economic system. A good indication of this is the current government development programme, some of whose aspects are outlined in this paper. As it will be seen later on, this programme concerns itself mainly with the expansion of exploitation of minerals (for foreign markets and interests), at the time of falling copper prices, and ignores almost completely agriculture and related infrastructure which are, by nature, oriented to the basic needs of the population. It is very clear from the start that any meaningful economic development cannot be expected from this programme, should it be fully implemented.

With these limitations in mind, it still remains that the gap approach can be an useful tool of analysis. Its predictive value allows both recipient and donor countries to search for the ways and means by which to achieve the desired and expected rate of growth before the programme has been put into effect.

3. - *Background to the* 6 % *target rate of growth*

The average rate of growth of 6 % a year between 1971-1980 has been assigned to the zairian economy (GDP) by the government (10). This rate of growth is the expression of a tacit program (since there is no formal planning in Zaire) of government investments and projected and induced parastatal and private investments for the rest of the decade, axed on the increase of metal production (copper production by Gecamines alone is expected to reach 560,000 metric tons by 1978, the production of steel and chemicals for internal market is scheduled to start by 1976). The mechanisms by which this program would be realized was outlined by the Minister of National Economy in a workshop held in June 1971. According to this outline, the following strategies have been proposed :

a) Import substitution : the recognition of the fact that there is still a large room for substitution of many imports by domestic production ;
b) Increase of processing content of exports products,
c) Production of manufactured goods for export to the African countries (11).

The rate of growth of 6 % a year between 1971-80 is not a very high rate of growth for the zairian economy, when one considers the potentialities and realizations of that economy. To speak only of the

realizations, between 1966 and 1970, the average annual rate of growth of GDP was 6,8 % (12). Although referring to a short period, this rate, which reflected the hard conditions of slow recovery from a large scale political crisis, was lower than that known between 1950-1956, wich was 7,8 % (13). This implies that a rate of growth of 6 % a year is not only sound, but also entirely within zairian economic capability. What is then needed is the will to achieve it.

However, such a rate of growth has no significant meaning as long as the rate of growth of GDP per capita is not known. Since, according to Kuznets, it is the rate of growth of GDP per capita which measures the actual growth of the economy. With an average annual rate of growth of 6 % for GDP and an average annual rate of growth of population of 2.3 % (14), the average annual rate of growth of GDP per capita implied by this program would be 3,7 %.

Given these conditions, what then will be the level of investment, internal saving and foreign exchange required to achieve 6 % growth rate ? To what extent will these resources from national economy fall short of the needed levels ? What will be the foreign contribution needed for the attainment of the desired and expected growth rate ?

These are the questions that will be dealt with in this paper.

II. - SAVING AND TRADE GAPS IN ZAIRE

A. *Saving Gap*

An analysis of saving gap requires the knowledge of the level of investments in a given period of time and the rate of saving in the economy. While the level of investments is roughly determined through the use of the incremental capital output ratio (ICOR), the rate of saving within the economy is determined by the marginal propensity to save.

1. - ICOR

While the ICOR has become the standard measure through which the level of investment is calculated, it still raises questions about its sensitivity or non-sensitivity to many factors, the projections of past K/L relationship, the structure of past resource endowments that have determined the structure of production. Defined as « the increase in a country's capital stock, over a period of years, divided by the increase in the country's productive capacity (expressed as output per year during the same period), the ICOR disregards economic or technical changes that may be going on. New natural resources may have been discovered, or may not have been. Th labour force may be growing rapidly or slowly. A new industry may be developing for which a very large amount of capital is required per unit of output,

for example a hydroelectric industry. Techniques may be changing. The ICOR rides roughshod over these changes, and merely takes the increase in productive capacity, whatever the reasons for it, and divides it by the increase in productive capacity, whatever its causes. Hence conceptually the ICOR is a very crude concept » (15). But to offset or to diminish the impact of past relationship on projections made on the basis of ICOR, would it not be better to take a relatively short period preceding the years for which projections are made ? While the impact of conjoncture on the ICOR calculated this way may be one of the causes of error, this may be offset by the more reliable relationships projected in the future. In the case of Zaire, given the fact that 1968 is the year which inaugurated a new era in the life of the country (since then no large crisis took place. Confidence in the country and its economy began to reappear. Drastic devaluation of June 1967 closed the period of financial and monetary uncertainty), it would seem that the ICOR calculated during 1968-1970 period is more reliable than that calculated for a long period, even though 1968-1970 period has been under relatively good prospects (the copper price has been high almost during all this period). However, the eventual impact of relatively poorer prospects of the years of projections may be offset by the substantial increase of the quantity of copper to be exported.

2. - PROJECTIONS

a) GDP (at 6 % growth rate, 1968 prices, millions of Zaire)

Base year : average 1968-1970 : $\frac{870.450 + 789 + 726.130}{3} = 795.5$

Table II : Projections of GDP at 1968 prices

1970 (average)	795.5
1971	843.2
1972	893.8
1973	947.3
1974	1004.3
1975	1064.5
1976	1128.6
1977	1196.0
1978	1267.9
1979	1335.6
1980	1425.5

Source of basic data : National Bank of Zaire, Annual Report 1970-71.

b) Level of investment

The level of investment is given, for each year, by the formula $k\,(r)\,(V^n)$ where : k = ICOR

r = rate of growth

V^n = output at nth year.

r and V^n being known and the average level of investment for the base period also known, it remains to calculate k, by $\frac{\triangle K}{\triangle Q} = k$

$G \triangle K$ (1968-1970) : 141 + 204 + 269 = 614

$G \triangle Q$ (1970-1968) : 870.5 — 726.1 = 144.4

$$k = \frac{G \triangle K}{G \triangle Q} = \frac{614}{144.4} = 4.2$$

Table III : Level of Investment (in millions of Zaires) at 1968 prices

	GDP	GI	% of GDP
1970 (average)	795.5	206.5	25.9
1971	843.2	213.5	25.2
1972	893.8	225.5	25.1
1973	947.3	238.7	25.1
1974	1004.3	252.1	25.1
1975	1064.5	268.5	25.2
1976	1128.6	284.4	25.1
1977	1196.0	301.4	25.2
1979	1335.6	319.5	25.1
1980	1414.5	336.6	24.4
1980	1414.5	356.5	25.5

Source : Basic data : National Bank of Zaire, Annual Report 1970-71.

c) Level of Saving (in millions of Zaires at 1968 prices)

In applying the formula SO + MPS (V^n — Vo), where

SO = Saving at base period
MPS = Marginal propensity to save
V^n = output at nth year
Vo = output at base year

$G \triangle S$ (1970-1968 : : 238.2 — 146.5 = 91.7

$G \triangle Q$ (1970-1968) : 870.5 — 726.1 = 144.4

$$MPS = \frac{G \triangle S}{G \triangle y} = \frac{91.7}{144.4} = 0.63$$

Table IV : Level of Savings at 1968 prices

	GDP	GS	% of GDP
1970	795.5	203.4	25.5
1971	843.2	233.5	27.6
1972	893.8	265.3	29.6
1973	947.3	299.0	31.5
1974	1.004.3	334.9	33.3
1975	1.064.5	372.8	35.1
1976	1.128.4	413.1	36.7
1977	1.196.0	455.7	38.1
1978	1.267.9	501.0	39.5
1979	1.414.5	543.7	40.7
1980	1.414.5	593.3	41.9

Source : Basic data : National Bank of Zaire, Annual Report 1970-71.

Putting together Table III and Table IV, we derive the gap, if any, of saving over investment.

Table V : Surplus or Deficit of Savings over Investments

	GI	*GS*	*Deficit (—) or Surplus (+)*	*% Coverage of Investment*
1970	206.5	203.4	— 3.1	98.4
1971	212.5	233.5	+ 21.1	109.8
1972	225.2	265.3	+ 40.1	120.1
1973	238.7	299.0	+ 60.3	125.2
1974	252.1	334.9	+ 82.8	132.8
1975	268.5	372.8	+ 104.3	138.8
1976	284.4	413.1	+ 128.7	145.2
1977	301.4	455.7	+ 154.3	151.1
1978	319.5	501.0	+ 181.5	156.8
1979	336.6	543.7	+ 204.1	161.5
1980	356.5	593.3	+ 236.8	166.4

Between 1970 and 1980, GI will grow at 5.6 % a year, while GS will grow at 11.2 % a year, exactly twice as fast as GI.

Comments on these results will be postponed until we have the results of the study on the trade gap.

B. *Trade Gap*

Contrary to the classical view that foreign aid or investment only has effect of supplementing domestic savings in the receiving country, the modern view, especially put forward by Chenery and Bruno, Chenery and Strout and others (16), stresses « that many goods have strategic importance in efficient industrial growth, but cannot be produced domestically in the early stages of industrial development. Foreign aid or private investment can have a large favourable impact on the growth rate when such a bottleneck constraint is binding, even though these transfers are a small fraction of available domestic savings » (17). It is in this critical role of foreign assistance that LDCS, especially at the early stages of their development, encounter one of the major obstacles to their development. Their almost permanent difficulties of Balance of Payments largely bears witness to their attempt to overcome this obstacle. Some would say wrongly, I think, that foreign assistance considered in its new role, is either an alternative to or a « reparation » for deterioration of the LDC's terms of trade. Foreign assistance is an alternative, not to the terms of trade, but to the level of export earnings which depends, among other things, on the terms of trade. And it seems that the impact of terms of trade on the export earnings is far less important than the quantities and structure of the products exported. Thus, foreign assistance, in its new role, is becoming, as Chenery and Strout point it out, a seperate and independent input in the development process everywhere it is needed.

Trade Gap in Zaïre

The study of trade gap requires the knowledge of import requirements and export earnings. The study of import requirements may be carried out through two different methods. The first approach is to study the structure of imports and the relationship between each component of import and the level of investments. These relationships would then be projected into the future, for the period of the study, in order to determine the imports requirements. The second method, the most used in this kind of study, uses the marginal propensity to import as a means of predicting the import requirements for the years of the study. The first method described above, with needed adaptation, may be also used for the projections of export earnings. The study of each export product, the evolution of its foreign market, both in terms of quantities and prices and the projections of these variables in the years of the study, provide the export earning projections (18). The second method for the study of export is similar to that described for imports. It consists of calculating the rate of growth of export earnings in the past and projecting it in the future. While for both imports and exports, the first method refines the analysis, the second method provides rough estimates of both import requirements and exports earnings. If a more refined analysis is needed, then one must refer to the first method. Otherwise, the second method is the most used, and it will be used here.

The base period is 1968-1970. The imports include services, since for an open and underdeveloped economy like ours, imported services will still be needed for a long time to come.

a) Import requirements :

In applying the formula : $Mo + u (V^n - V_c)$.
where :

Mo = import at base year ;
u = MPI ;
V^n = output at nth year
V^n = output at base year
MPI = Marginal propensity to import.

$G \triangle M$ 1970-68 : 377.5 — 271.1 = 106.4
$G \triangle Q$ 1970-68 : 870.5 — 726.1 = 144.4

We have :

$$MPI = \frac{106.4}{144.4} = 0.73$$

$$\text{Average imports} : \frac{271.1 + 310.0 + 377.5}{3} = 319.5$$

Table VI : IMPORT REQUIREMENTS

	GDP	Imports (or M)	% of GDP
1970	795.5	319.5	40.1
1971	843.2	344.3	40.8
1972	893.8	391.3	40.3
1973	947.3	430.3	40.5
1974	1004.3	471.9	46.9
1975	1064.5	515.9	51.2
1976	1128.6	562.5	49.8
1977	1196.0	611.9	51.9
1978	1267.9	664.4	52.4
1979	1335.6	713.8	53.5
1980	1267.9	771.4	54.5

Source : Imports for base year : National Bank of Zaire, Annual Report 1970-71.

According to the data above, the average annual rate of growth of imports between 1970-80 is 9.2 %.

b) Export earnings (millions of zaires, at 1968 prices)

In applying the formula :

$$X^n = x_o (1 + R)^n,$$

where :

X^n = exports earnings at n^{th} year

r = rate of growth of exports earnings

X_p = export earnings at the base year,

and given : — 6,4 % average annual rate of growth of exports earnings between 1968-1970,

— 330.6 base year average export earnings of 1968, 1969, 1970 which were respectively : 311.4 ; 327.65 ; 353.0 millions of zaires.

We have :

Table VII : EXPORT EARNINGS PROJECTIONS, 1970-1980
(at 1968 prices)

	GDP	X	$\frac{X}{GDP}$ (100)
1970 (average)	795.5	330.6 (average)	41.5
1971	843.2	351.8	41.7
1972	893.8	374.3	41.8
1973	947.3	398.2	42.0
1974	1004.3	423.7	42.1
1975	1064.5	450.8	42.3
1976	1128.4	479.7	42.5
1977	1196.0	510.4	42.7
1978	1267.9	543.1	42.8
1979	1335.6	575.5	43.0
1980	1414.5	614.8	43.4

Source : base year : National Bank of Zaire, Annual Report 1970-71.

Table VIII : TRADE GAP (in millions of zaires at 1968 prices

	X	M	X — M
1970	330.6	319.5	+ 11.1
1971	351.8	344.3	+ 7.5
1972	374.3	391.3	— 17.0
1973	398.2	430.3	— 32.1
1974	423.7	471.9	— 48.2
1975	450.8	515.9	— 65.1
1976	479.7	562.5	— 82.8
1977	510.4	611.9	— 101.5
1978	543.1	664.4	— 121.3
1979	575.5	713.8	— 138.3
1980	614.8	771.4	— 156.6

C. *Comments on the above results :*

1) Comments on the data :

The basic data used in the study of saving gap and trade gap are drawn from the National Bank of Zaire Annual Report 1970-71. It is generally accepted that, with respect to the basic data in Zaire, this source is among the rare reliable sources in the country. However, for the statistics of external trade, it is well known that they are everywhere inaccurate, expecially in the less developed countries. In Zaire, the inaccurate character is reinforced by the fact that, inspite of the existence of stringent laws, the frontiers and the custom-houses are still open to smugglers, helped by corruption.

Another reason which could have an impact on the above results is the short period taken as a basis for calculation of some parameters or rate of growth. For this study, I do not think this is the case. Indeed, if one considers the items included in Table I, he will see that between 1950 and 1956, the overall investments and savings (gross investments and gross savings) grew at 5.7 % a year, while my rate of growth of investments between 1970 and 1980 has been put at 5.6 % a year (GI). However, my rate of saving during 1970-1980 is almost twice as much as that of 1950-1956. Assuming the data is reliable, the shortness of the period may be a possible explanation of this. But also and much more likely, it may be explained by the fact that since 1965, (except from July 1967 to September 1968 period following the June 24, 1967 devaluation) there have been large excesses of demand over supply for most goods. In the regime of price control which prevails in Zaire, this has pushed up saving behavior as attested, among other things, by the permanent situation of overliquidity of zairian banks.

The ICOR, calculated for the period from 1968 to 1970 is almost of the same magnitude as that calculated by Mr. Laporte of National Bank of Zaire (19). Calculated on the basis of 1950-1959 and 1966-1970 observations as he says, Mr. Laporte's ICOR is put at 4.4 for GI while mine is 4.2 for the sam item. One must notice that both Mr. Laporte's ICOR and mine are inferior to that calculated by Kuznets whose ICOR, calculated during the period 1951-1957, has been put at 6.81 (20).

Finally, as stated above, I have adopted a method which leads to rough estimates.

2) Comments on the results :

Aside from 1970 where there seemed to be a saving deficit, and 1970 and 1971 where there seemed to be a trade surplus, due without doubt to the use of average figures (21), the fundamental trend revealed by the above results is the emergence of savings surpluses and trade deficits :

Fundamental Trend of Gap Analysis in Zaire
(millions of zaires at 1968 prices)

	Savings gap (GS)	Trade Gap
1970 (base year : average figures) ..	— 3.1	+ 11.1
1973	+ 60.3	— 32.1
1975	+ 104.3	— 65.1
1980	+ 236.8	— 156.6

At this stage of economic development in Zaire, this trend is quite normal. However, for the saving gap, it contrasts with the situation of some LDC's that have shown a tendency to raise the level of investments much more rapidly than the level of savings (22).

Given the worsening trend of the trade gap as more and more investments are undertaken in Zaire, what are the prospects of improving it, besides foreign aid ?

As said earlier in this paper (introduction), the current government program of investments is based on metal production, especially copper production. Three companies are engaged in this field. While Gecomines is committed to expand its productive capacity during the decade, SODIMIZA is entering production phase and Société Minière TENKE-FUNGURUME will soon have its facilities established. As of November 1970, as shown in Table IX, huge investments in this sector have been approved.

Table IX : INVESTMENT PROJECTS PRESENTED AND EXAMINED BY THE COMMISSION OF INVESTMENT ON NOVEMBER 30, 1970 (in thousand of zaires)

ECONOMIC ACTIVITIES	Presented to the Commission		Examined by the Commission		Agreed by Official Act	
	Number	Value	Number	Value	Number	Value
Agriculture and related industries	3	997	2	553	2	533
Mining and Mettalurgy industries	5	53,432	2	51.813	2	51.813
Manufacturing industries	48	48,871	36	23.933	32	13.728
— Agricultural processing products, foods and drinks	(11)	(5,322)	(8)	(2.491)	(8)	(2.491)
— Materials for construction, cement, ceramic	(12)	(22,616)	(7)	(5.577)	(7)	(5.577)
— Mechanical & electrical Inds.	(4)	(2,074)	(3)	(591)	(2)	(538)
— Chemical, rubber and others	(7)	(2,061)	(5)	(1.814)	(5)	(1.814)
— Textile, cloth	(8)	(15,172	(7)	(11.834)	(4)	(1.682)
— Wood, pulp paper	(6)	(1,626)	(6)	(1.626)	(6)	(1.682)
Building and public works	3	1,922	2	852	2	852
Banks	3	6,006	2	4.560	2	4.560
Transportations	4	38,595	2	9.608	2	9.608
Services	8	3,214	6	2.591	5	2.035
TOTAL	74	153,037	52	93.890	47	83.129

Source : Banque Nationale du Congo, Rapport Annuel 1969-70, p. 79.

The expansion of Gecamines's production is expected to reach 450,000 tons of copper by 1974 and 560,000 tons by 1978. The economic and profitability studies of the investment program have been based on an average copper price of US $ 0.45 a pound in the next five years. The required investment in mining installations is estimated at some $ 80 millions and additional finance will be required to expand production of electricity. Of the total mining investment, about one-half will be financed directly by Gecamines from its own resources, and the balance will be obtained mainly from foreign long term loans and supplier's credit (23). On the basis of $ 0.45 per pound, the expansion of Gecamines's production will provide :

	1974	1978
Volume in millions pounds	900	2240
U.S. $ millions	405	1106
Zaires millions (rate : 1 Z = 2 $) ..	202.5	553
Total projected export earnings (millions of zaires)	423.7	543.1

If these calculations are correct, then the contribution of copper to the export earnings in 1974 will be 47.7 % as against 66.5 % on average (1968–70). Indeed, in 1968, 1969 and 1970, the copper contribution to the total export earnings was respectively 67.0 %, 66 1 % and 66.5 % (24).

One would notice that the export earnings from copper in 1978 exceed my projected total export earnings by 9.9 millions of zaires. On the basis of 1978 copper export earnings (it is assumed that all production will be exported) and 66.5 % average rate of contribution of copper to export earnings in 1968-1970, the total export earnings will be 844.4 millions of zaires. That amount exceeds my projected imports requirements by 180.0 millions of zaires. Should this hypothesis be verified, then from 1978 on, there would be no trade gap as projected above.

If the rate of contribution to the total export earnings is that of 1974 above mentioned (47.7 %), then the situation would be much better. It would mean that the other export items have substantially improved their share. This hypothesis would correspond to 1159.3 millions of zaires in 1978 and would lead to a trade surplus of about 494.9 millions of zaires on the basis of my projected import requirements.

These are still hypotheses and projects. And the prospect of trade surplus will be brightened by the production and export of copper by the other two companies.

III. - CONCLUSIONS

The indicators used in this study have led to the prospects of increasing saving surplus and trade deficit from 1973 to 1980. However, if the expansion of copper production and export take place, then from 1978 on, there will be no trade gap. Otherwise, the magnitude of the

trade gap during the period of the study will be 762.9 millions of zaires. The gap will be assumed to be fulfilled by foreign aid, foreign exchange reserves being considered wnil.

These indicators have been :

RGDD	ICOR	MPS	MPI	RM	RE	RGI	RGS
%				%	%	%	%
6.0	4.2	.63	.73	9.2	6.4	5.6	11.2

whe :

MPS = marginal propensity to save
ICOR = incremental capital output ratio
MPI = marginal propensity to import
RM = rate of Growth of imports
RE = average annual rate of growth of export
RGI = average annual rate of growth of gross investments
RGS = average annual rate of growth of gross savings
RGDP = rate of growth of gross domestic product

Thus

1) The rate of growth of investments is less than the rate of growth of GDP. This situation does not respond to the investment criteria established by Chenery and Strout for measuring the progress toward a given rate of self-sustaining growth. According to this criteria, the rate of growth of investment must be greater than the target growth rate.

2) The average rate of growth of savings is greater than the rate of investment. This situation responds to the Chenery and Strout's saving criteria.

3) The rate of growth of export is higher than the rate of growth of GDP. This situation does meet the Chenery and Strout's trade criteria (25).

REFERENCES

1) See B. Luabeya Kabeya : « Foreign Investments and congolese politics », IDS, the Fletcher School of Law and Diplomacy, Medford, 1971 (mimeo).

2) Some regions belonging to the present zairian territory (Low Zaire) had been in contact with the European traders as early as XVth century and had known exchange of some goods and services, including exchange of diplomatic missions and evangelization. But these activities had been sporadic and passengers.

3) See Alfred Clapys — Bouvaert : « Les aspects politiques, administratifs et sociaux des réalisations bilatérales belges dans le domaine du sous-développement économique ». *In la Belgique et l'aide économique aux pays sous-développés.* I.R.R.I., Bruxelles, 1959, p. 182.

4) For 1955 see Ferdinand Bezy : *Problèmes structurels de l'économie congolaise*, Ed. E Nauwelaerts, Louvain, 1957, p. 102.
For 1959 see Bulletin Mensuel des Statistiques générales, dec. 1959.

5) See René de Schutter : « Les aspects économiques et financiers des réalisations bilatérales belges dans le domaine du sous-développement économique ». *In la Belgique et l'aide économique aux pays sous-développés*. op. cit. ; p. 218.

6) See René de Schutter, op. cit., p. 223.

7) See Claude Carbonnelle : « Les résultats des réalisations bilatérales belges dans le domaine du développement économique ». *In la Belgique et l'aide économique aux pays sous-développés*, op. cit., p. 234.

8) This is a part of a study done by the author in 1973 regarding the financial implications of the zairian government economic program for this decade. Today, it must be considered as a pure exercise for two reasons. First, at three years from the end of the decade, only a part of the program has been more or less implemented : the expansion of copper production, the creation of steel mill and the production of electric energy from Inga dam. The other sectors, mainly agriculture, manufacturing and commerce, have drastically regressed. Second, a set of political and economic policies and practices, put forward since 1971, if not earlier, have resulted, helped in that by the worsening of the terms of trade of copper, the increasing cost of petroleum products and, later, the involvement in the angolan war, in their logical pay off, that is, the economic chaos and the bankruptcy of the country. This result was not a surprise to us. We predicted it in our paper : « Diversification et Développement : cas du Zaïre. IDS, the Fletcher School of Law and Diplomacy, Medford, 1972 (mimeo).

9) See Chenery and Strout : « Foreign Assistance and Economic Development ». *A.E.R.*, vol. LVI, N° 4, part 1 Sept. 1966, p. 680.

10) See Banque Nationale du Zaïre : *Rapport Annuel* 1970-71, p. 16.

11) See Banque Nationale du Zaïre, *Rapport Annuel* 1970-71, p. 23.

12) *Idem*, p. 74.

13) See République Démocratique du Congo : *Bilan* 1965-1970, p. 40.

14) Banque Nationale du Zaïre, Annual Report 1970-1971, advances a rate of Growth of 2.7 % for population. This rate seems to me too high and it does not seem to take into account the serious deterioration of health conditions in Zaïre. I prefere the rate of 2.3 % put forward by the Enquêtes démographiques au Congo 1955-57.

15) Hagen E.E. : *The Economics of Development*, Richard D. Irwin Inc, Homewood, 1968, pp. 185 - 186.

16) See H. B. Chenery and M. Bruno : Development Alternatives in a open Economy : the case of Israël. *In Economic Journal*, Vol. 57, N° 285, March 1962, pp. 79-103. See also H.B. Chenery and A.M. Strout : Foreign Assistance and Economic Development. *In A.E.R.*, vol. LVI n° 4 part 1, Sept. 1956, pp. 679-691.

17) R.L. Mc Kinnon : Foreign Exchange constraints in Economic Development and Efficient Aid Allocation. *In Economic Journal*, op. cit. 388.

18) See A. Maizels : *Exports and Economic Growth of developing countries*, the University press, Cambridge, 1968.

19) M. Laporte (of Banque Nationale du Congo) : *Etude des perspectives de l'économie congolaise pour la période* 1970-1975, Kinshasa, juin 1971, p. 7.

20) See E.E. Hagen : *The Economics of Development*, op. cit., p. 281.

21) There was actually a saving gap and trade gap in 1970. While the average figures used in the text have shown saving gap in 1970, they showed trade surplus in that year, which was not accurate. See Banque Nationale du Zaïre, *Rapport Annuel* 1970-71, p. 81.

22) See Chenery and strout, op. cit., p. 682.

23) IMF : *Surveys of African Economies*, vol. V, pp. 44-45.

24) See Banque Nationale du Congo, *Rapport Annuel* 1970-71, op. cit. p. 164.

25) See Chenery and Strout : « Foreign Assistance and Economic Development », op. cit., p. 705.

RÉSUMÉ

Il est bien connu qu'en pays sous-développés, l'exécution intégrale des programmes de développement, à supposer que ceux-ci soient bien conçus et bien étudiés, se heurte à de nombreux obstacles, dont, entre autres, l'insuffisance ou le manque de ressources financières nationales. Le recours à l'aide étrangère s'impose alors si l'on veut avancer dans la réalisation du programme de développement.

Dans ce papier, l'auteur discute certains aspects du programme de développement du Zaïre pour la période 1971-1980. On notera, dès le départ, que la stratégie adoptée est celle du développement par commerce extérieur. Ainsi, le programme en cours concerne principalement l'expansion de l'exploitation des produits miniers pour le marché extérieur, avec le cuivre en tête au moment où le cours mondial de ce produit est à la baisse ; et accessoirement une petite unité sidérurgique et quelques entreprises chimiques pour le marché intérieur. L'agriculture vivrière et l'infrastructure de transport dont celle-ci est tributaire qui, par essence s'adressent à la majorité de la population, n'ont pas de place dans ce programme. Comme on peut le voir, ce programme n'a pas de portée développementale réelle, dans la mesure où les activités principales envisagées ne s'adressent pas au marché intérieur et que le peuple n'en tirera pas de profit notable.

L'exécution intégrale de cet ensemble de projets devrait aboutir à une expansion de l'économie (Produit Intérieur Brut ou PIB) de l'ordre de 6 % l'an en moyenne entre 1971-1980. Utilisant les relations Epargne - Investissement et Imports - Exports comme instruments d'analyse formulés de la manière la plus simple, l'auteur essaie de résoudre un exercice pratique suivant : étant donné un taux de croissance de l'économie de 6 % l'an en moyenne entre 1971-1980, quel est le montant d'aide étranger, si besoin d'aide étranger il y a, nécessaire à la réalisation d'un tel rythme de croissance ?

L'étude aboutit aux résultats suivants :

— la balance Epargne-Investissement est largement positive tout au long de la période considérée ;

— la balance Imports - Exports est largement déficitaire tout au long de la période considérée. Il en résulte un appel à l'aide financière étrangère de plus en plus importante, à mesure qu'on avance dans la réalisation du programme.

Au stade actuel du développement économique du Zaïre, une pareille évolution paraît normale. Cependant, s'agissant de la balance Epargne-Investissement, le cas zaïrois semble contraster avec ceux des autres pays sous-développés du même niveau de développement économique, qui se sont montrés plus capables d'accroître le niveau d'investissements beaucoup plus rapidement que le niveau d'épargne.