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GLOSSARY OF ACRONYMS

ACP	African, Caribbean, and Pacific
AfDB	African Development Bank
ABG	Société de l'Alimentation Générale du Bénin
ASECNA	Agence pour la Sécurité de la Navigation Aérienne en Afrique et à Madagascar
BADEA	Banque Arabe pour le Dévt. Economique en Afrique
BBD	Banque Béninoise pour le Développement
BCB	Banque Commerciale de Bénin
BCEAO	Banque Centrale des Etats de l'Afrique de l'Ouest
BELIMINES	Société Bénino-Arabe Libyenne des Mines
BELIPECHE	Société Bénino-Arabe Libyenne de Pêche
BOAD	Banque Ouest Africaine de Développement
CAA	Caisse Autonome d'Amortissement
CARDER	Centre d'Action Régionale pour le Dévt. Rural
CCCE	Caisse Centrale de Coopération Economique (France)
CCN	Commission Céréalière Nationale
CCP	Centre des Chèques Postaux
CEB	Communauté Electrique du Bénin
CFA	Communauté Financière Africaine
CIB	Céramique Industrielle du Bénin
CNCA	Caisse Nationale de Crédit Agricole
CNE	Caisse Nationale d'Epargne
CNEP	Commission Nationale d'Etat de la Planification
CNERTP	Centre National d'Essais et de Recherches de Trav. Publics
CPPE	Centre de Perfectionnement du Personnel d'Entreprise
COBENAM	Compagnie Béninoise de Navigation Maritime
COFACE	Compagnie Française d'Assurance du Commerce Extérieur
CRP	Comité Régional de la Planification
DEP	Direction des Etudes et de la Planification
DPE	Direction de la Planification d'Etat
DPP	Direction Provinciale de Planification
EC	European Communities
ECOWAS	Economic Community of West African States
EDF	European Development Fund
EIB	European Investment Bank
FAC	Fonds d'Aide et de Coopération (France)
FAO	UN Food and Agriculture Organization
FAS	Fonds Autonome de Stab. & Soutien des Prix des Prod. Agri.
FED	Fonds Européen de Développement
FNI	Fonds National d'Investissement
GMB	Grands Moulins du Bénin
GRVC	Groupement Révolutionnaire à Vocation Coopérative
GV	Groupement Villageois
IBETEX	Industrie Béninoise des Textiles
IDA	International Development Association
INC	Institut National de Cartographie
INSAE	Inst. National de Statistique et de l'Analyse Economique
INSEE	Institut Nationale de Statistique et Etudes Econ. (France)
IPRAO	Institution de Prévoyance et de Retraite de l'Afrique Occi.
LNB	Loterie Nationale du Bénin
MDRAC	Ministère du Dévt. Rural et de l'Action Coopérative

MFEFP	Ministère des Fermes d'Etat, Elevage et Pêche
MIEPSEP	Ministère
MIME	Ministère
MPSAE	Ministère
OAE	Office d'Approvisionnement d'Etat
OBAR	Office Béninois d'Aménagement Rural
OBEMAP	Office Béninois de Manutentions Portuaires
OBEMINES	Office Béninois des Mines
OBEPEP	Office Béninois d'Exploitation des Prod. d'Elevage
OBSS	Office Béninois de la Sécurité Sociale
OCAM	Organisation Commune Africaine et Malgache
OCBN	Organisation Commune Bénin-Niger de Chemins de Fer
ONAB	Office National du Bois
ONATHO	Office National du Tourisme et de l'Hôtellerie
ONC	Office National des Céréales
ONP	Office National de Pharmacie
OPEC	Organization of Petroleum Exporting Countries
OPT	Office des Postes et Télécommunications
PAC	Port Autonome de Cotonou
RAC	Régie d'Approvisionnement et de Commercialisation
RMSM	Revised Minimum Standard Model (IBRD)
RMSM-X	Extended RMSM Model (IBRD/CECMG)
SABLI	Sté. Agro-Animale Bénino-Arabe Libyenne
SBEE	Sté. Béninoise d'Eau et d'Electricité
SCB	Sté. des Ciments de Bénin
SCO	Société des Ciments d'Onigbolo
SDA	Social Dimensions of Adjustment, World Bank Group
SMAG	Salaire Minimum Agricole Garanti
SMIG	Salaire Minimum Interprofessionnel Garanti
SNAFOR	Sté. Nationale pour le Dévt. Forestier
SOBEMAC	Sté. Béninoise des Matériaux de Construction
SOBEPALH	Sté. Béninoise de Palmier à Huile
SOBETEX	Sté. Béninoise des Textiles
SODERA	Sté. de Dévt. des Ressources Animales
SODIMAS	Sté. de Distr. des Fournit./Matér. Adm. et Scolaires
SOGECOB	Société Générale de Commerce du Bénin
SONACEB	Sté. Nationale de Commercial. et d'Export. du Bénin
SONACI	Sté. Nationale des Ciments
SONACOP	Sté. Nationale de Commercial. de Produits Pétroliers
SONACOTRAP	Sté. Nationale de Construction et des Trav. Publics
SONAFEL	Sté. Nationale des Fruits et Légumes
SONAGRI	Sté. Nationale pour le Dévt. Agricole
SONAMEL	Sté. Nationale de Matériel Electri. et Electroménager
SONAPAL	Sté. Nationale de Papeterie et de Librairie
SONAPECHE	Sté. Nationale d'Armement et de Pêche
SONAPRA	Sté. Nationale pour la Promotion Agricole
SONATRAC	Sté. Nationale de Transit et de Consignation
SONIAH	Sté. Nationale d'Irrigat. et d'Amenagt. Hydro-Agricole
SONIB	Sté. Nationale d'Importation du Bénin
SONICOG	Sté. Nationale pour l'Industrie des Corps Gras
SOTRACOB	Sté. de Transit et de Consignation
SSS	Société Sucrière de Savé
STC	Sté. des Textiles et des Chaussures
TAB	Transport Aérien du Bénin

TRANS-BENIN  
UMOA  
UNDP  
USAID

Société des Transports du Bénin  
Union Monétaire Ouest Africaine  
United Nations Development Program  
United States Agency for International Development

## I. Historical Background

### A. The Macroeconomic Context

1. A small country of 112,622 square kilometers, Benin is bordered by Nigeria on the east, Niger and Burkina Faso on the north, Togo on the west, and the Atlantic Ocean on the south. With a population of 4.5 million (1988) and growing at an estimated annual rate of 3.3 percent, and a per capita GNP of about \$340 (1988), this IDA-only country ranks amongst the poorest countries of the world.

2. Benin has a predominantly rural economy, with more than three fourths of its active labor force engaged in agriculture or agricultural related activities. Agricultural primary production provides some 40 percent of total value-added and contributes more than 30 percent of export earnings. Traditional crops such as cotton, palm products, coffee, and cocoa are the main primary export commodities. On the foodcrop side, the country essentially produces maize, cassava, yams, and beans.

3. Mainly composed of light manufacturing industries, construction and public works, transport, and more importantly commerce, the Beninese modern sector was quite active up the 1970s. Commercial activities and related transport services in Benin are heavily influenced by the economic situation prevailing not only in Nigeria, but also in other neighboring landlocked countries.

4. Over the 1975-82 period, Benin enjoyed a rapid GDP growth averaging 5 percent per annum. Benin's economy performed well over the period with internal and external financial stability due mostly to: (1) productive investment activities under the First State Plan (1977-80); and (2) strong regional re-export trade, especially with Nigeria. Benin was quite illusioned by these unprecedentedly favorable developments. Therefore, the Government sought to accelerate growth and development by having the State become the owner of the major modern economic activities in the country: i) the para-public sector grew more than three-fold by nationalization of the existing private sector businesses and the creation of new public enterprises; ii) collective agricultural farming systems were actively promoted through monopolistic state farms with controls established on the trading of all crops; and finally iii) macroeconomic policy was excessively expansionary, primarily based on large foreign borrowing and imprudent use of domestic banking credit.

### B. Sources and Problems of Economic Data

1. As in most of the developing world, economic and social information is an extremely precious commodity when it exists. Even then, the quality of the data is usually poor. At this stage, ECOBENIN aims at

providing an analytical framework that will certainly be useful in tackling the chaotic economic data problems in Benin. The preliminary data herewith are in many cases rough estimates, sometimes inconsistent and of highly questionable reliability. Therefore, extreme caution should be observed at all times when using this document.

2. For the purpose of building this database, the main sources of historical (1980-87) information were the following:

a. Primary Sources: (1) IMF's Recent Economic Development (RED 1980, 83, 86, 87); (2) IMF's Statistical Annex (June 1989); and (3) Bank's Country Economic Memorandum (March 1984, in four volumes) and Debt Reporting System (DRS).

b. Secondary Sources: (1) Statistiques Mensuelles et Annuelles du Port Autonome de Cotonou (PAC); (2) Plan National de Développement Economique et Social 1988-1992 (Ministère du Plan et de la Statistique - MPS); (3) Comptes de la Nation 1985 (MPS); and (4) Rapport d'Exécution du Programme d'Investissement Public 1986 (MPS).

3. Since it would be extremely cumbersome to list all the sources for every single variable in the model right here in the text, Javelin's capability of annotated model equations listing will be used in the attachments where proper reference can be made.

### C. Recent Economic Developments

1. Starting with 1983, the early policy errors reversed the short-lived economic prosperity, leading to a period of low growth with structurally weak public finance, large balance of payments deficits, mounting accumulations of both domestic and external arrears, and a completely bankrupt banking system.

2. In light of serious internal and external imbalances, the adjustment efforts started in 1983 happened to be, on all accounts, largely insufficient. Spurred by the growing severity of the economic and financial difficulties, the Government has prepared a comprehensive economic adjustment program supported by the international donor's community with a leading role to the World Bank and the International Monetary Fund.

## II. The General Analytical Framework

### A. Overview and the Underlying Software

1. On the one hand, many development institutions such as the World Bank were, and still are today, faced with the extremely urgent need of resources flows to the Third World. On the other hand, they also quickly

realized that sound macroeconomic and sectoral policies ought to be fully promoted if any benefits is to be expected from external aid. Therefore and in the early 1970s, the Bank put tremendous effort into developing a "quick and dirty" framework (i.e. the Minimum Standard Model -- MSM) which has been revised over the years and known today as the Revised Minimum Standard Model or RMSM 1/. Before its present Lotus 123 version, the RMSM was implemented in FORTRAN 88 for use on the Burroughs mainframe computer, and then translated into BASIC on microcomputers. On all accounts, this consistency national income accounting tool contributes greatly to the Bank's economic dialogue with member countries for which the most scarce goods after foodstuffs are economic and social information.

2. Those who oppose the RMSM often argue, quite rightly, the following: i) the model is too compact, especially in the sector that constitutes the cornerstone of national income accounting, i.e. production. Only the three traditional aggregated sectors of Agriculture, Industry, and Services are distinguished; ii) the model uses too many unknown and non-estimated parameters in addition to a plethora of exogenous variables; iii) a complete absence of key public finance variables and linkages between public sector deficits, on the one hand, domestic credits, money creation and external indebtedness, on the other hand; and most importantly iv) not a single behavioral equation is embeded into the model.

3. Nevertheless, the RMSM model assures consistency among growth objectives, imports requirements, exports potential, external debt, and domestic savings and investment plans. It is referred to as a "two-gap" model because it assumes growth is constrained by a trade gap (imports, M, less exports, X); and a savings gap (savings, S, less investment, I). The present and most used version assumes that the most important constraint to growth is the trade gap (requirements version) 2/. It has been recognized bankwide that an effort is needed in terms moving one step ahead of the RMSM model by: 1) expansion and analysis of economic and financial impacts of public sector deficits and other related accounts, especially in the UMOA/UDEAC monetary zones; and 2) introduction of some basic behavioral equations. Results from these efforts are beginning to show up. More and more, discussions are being organized around models such as RMSM-X, RMSM-XX, and MACOR (CECMG) and other policy-based Computable General Equilibrium models (CGEs) and their numerous variants;

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1/ For a comprehensive description of the RMSM model, see "Guide to Modeling Systems", IBRD: Country Analysis and Projections Division, February 1984.

2/ Ex-post, the trade gap must be identically equal to the savings gap ( $M - X = I - S$ ). However, at the beginning of any year or accounting period, economic agents' plans based on current developments and future expectations may be such that one of the two gaps is greater. When people's plans are such that  $M - X$  would be greater than  $I - S$ , the trade gap is said to be active or binding.

4. The present ECOBENIN is also an attempt to improve the existing RMSM-based macroeconomic framework for Benin. When fully implemented, it will include all features described above that are missing in the standard RMSM. However, at this stage of the first version, only a few improvements are done over and above the RMSM, as will be discussed below.

5. JAVELIN PLUS, the microcomputer software retained by the Bank Group for the Economist Workstation Project (EWS), is the underlying software as mentioned in the cover note. Javelin plus is one of the most complete business analysis tool for microcomputers. It has capabilities that no other single business application software provides. Javelin goes far beyond powerful programs like Lotus 123, Symphony, and Enable by combining their best features with the capabilities of add-on and utility packages. Javelin is usually described as the program that "works the way you think rather than requiring you to think the way it works". Of all its great features, its ability to store formulas and values in a Central Database that is completely independent from individual worksheets one may create, is the most useful for model building, database creation and maintenance, or economic analysis. In addition, it is the best time series (day, week, month, quarter, year, or customer defined period) handler I have ever seen. Unlike Lotus 123, Javelin Plus is a variable-based software. Its incredibly free-style and wordly unconstrained variable naming capability is among its most fascinating features. For example, "GDP at Factor Cost", "at Factor Cost GDP" and "Factor GDP at Cost" are exactly the same and unique variable. Javelin Plus does also graphs and other charts at a "flip of a coin" (see enclosed graphs and charts). Through its Building Block capabilities, Javelin Plus is fully compatible with almost any other PC-base software.

#### B. The Structure of the Model

Note: It is important for the reader to know the following basic prefixe conventions used in naming the variables in the model:

C : Constant 1980 data, in CFA francs  
 N : Nominal data, in CFA francs  
 R : Quantities (in metric tons or kg)  
 S : Social indicator data

GDP : Production  
 EXS : Export  
 IMP : Import  
 INV : Investment  
 CONS : Consumption  
 NAT : National accounts  
 NFS : Non-factor services  
 RATIO : Ratio  
 COEF : Coefficient  
 ZSHARE : Percentage share  
 DEFLAT : Price deflator  
 BOP : Balance of payments

CAP : Capital account  
 USD : Current US dollar  
 IND : Indicator

## 1. Population and Social Statistics

a. At this stage, only total population is calculated in the model using exogenous growth rates. Historical figures reflect official government data. The next issue of ECOBENIN will attempt to compile the complete social indicator data sheet that is included in both the Bank's official annual publications entitled "Social Indicators of Development" and "World Development Report". Nevertheless, population and its growth rates constitute key variables in this model for the computation of target levels of policy indicators such as food consumption, total consumption and GNP per capita. I will look forward to benefiting from various social databases being created and maintained by the Social Dimensions of Adjustment Unit (AF1SD) in participating member countries through its efforts in poverty assessment and alleviation.

## 2. National Product and Income Accounts

Generally speaking, all historical 1980-87 GDP aggregates are recorded both in current and constant 1980 prices based on (1) various government official statistics (very questionable); and (2) various Bank and IMF staff estimates. Implicit GDP as well as sectoral deflators are endogenously obtained by ratios of current to constant 1980 prices GDP. The obvious inconsistencies appear when one examines tremendous fluctuations in those deflators. At this point, it hard to tell whether the problems are in the current or constant series data. Nevertheless, exogenous assumptions are made in terms of (i) [targeted] potential sectoral growth rates; and (ii) evolution of sectoral prices in the medium- to long-term.

For each sector  $i$ , the three basic EQUATIONS are as follows:

(Eq Nat1) Real GDP $_i$  (t) = Real GDP $_i$  (t-1) \* targeted gr\_rate  
 (Eq Nat2) Deflator  $D_i$  (t) = deflator  $D_i$  (t-1) \* est. gr\_rate  
 (Eq Nat3) GDP (t) at f.c. = Sum over  $i$  of GDP $_i$  (t)  
 (Eq Nat4) Nominal GDP $_i$  (t) = Nominal GDP $_i$  (t-1)/Deflator  $D_i$  (t)

### a. Agriculture Production

(1) Foodcrops production:, in the case of Benin, is one of the critical policy variables. Most of our rural development strategies, food security and community development, and poverty alleviation in general are targeted to increase food production by the rural poor and their effective demand and consumption of food; and thereby increasing per capita food production and consumption. Consequently, the targeted long-term real rates of growth are set to 5% for foodstuffs, or two percentage points above population growth of 3%, and to 3% for fruits and vegetables production.

(2) Cash Crops production: is mainly concerned with (1) cotton and cotton products; (2) oil palm products; and (3) coffee and cocoa. With the extremely bleak forecasted future prices on the world's international market for these traditional crops, the lack of domestic market, and the very limited regional export possibilities, growth opportunities are limited for these crops in the short-term.

(3) Other primary products: consist of a small and underdeveloped livestock industry, a mainly traditional fishing sector, and an environmentally constrained forestry sector. Future efforts are aimed at (a) modernizing both the livestock and fisheries industries; and (b) promoting comprehensive reforestation initiatives in order to protect the unrenewable natural resources.

#### b. Industrial Sector

(1) Mining: was practically inexistent before 1983 when the Sémé-Oil Project started production. After few years of rapid growth in crude oil output up to the 1985-86 period, the sector suffered successive price shocks from which it has not yet recovered. From a peak of about 385 thousand tons of crude oil in 1984 (or 2.8 million barrels equivalent), crude oil output in Benin has decreased to an estimated 230 thousand tons in 1988, or 1.6 million barrels equivalent.

(2) Manufacturing: output is extremely small in Benin. The only light manufacture producing units are i) few breweries and flour mills factories that rely heavily on imported inputs; ii) a cement factory that is under-utilized due mainly to lack of market; and iii) a small textile sector for which the primary input, i.e. cotton, is readily available. With the open-up of the sector through various agricultural operations coupled with SAL related policy reforms, it is expected that some private food processing units that use locally produced agricultural inputs will start industrial businesses in the not-so-long future.

(3) Construction and Public Works: is also relatively small sector that is dominated by few state-owned enterprises. Despite the near bankruptcy of the Beninese central government, the construction and public works sector did quite well. Nevertheless, future prospects are contingent upon not only developments in the other sectors of the economy, but also on the general economic performance in neighboring countries.

(4) Electricity and Water: received a boost with the completion of the joint Togo-Benin hydroelectric plant of Nangbeto which is physically in Togo. Despite its relatively small share in total GDP, this sector is expected to be promising once the abuse -- in terms of impaired public consumption bills -- has been stopped.

#### c. Tertiary Sector Production

(1) General commerce and transit trade: As previously indicated, the overall economic performance in Benin depends, to a large extent, to developments in its neighboring countries, especially Nigeria. These impacts are most clearly accounted for in the sector of commerce and transit trade. With recent implementation of favorable macro-economic measures in Nigeria: devaluation of its currency (Naira) followed by other sectoral liberalization, Nigeria has become a fierce competitor due to substantial gain in trade comparative advantage over Benin. SONACOP has recently experienced a decline in sales, and smuggling from Nigeria has become an acute public finance problem. In the medium- to long-term and in the best case where recommended economic reforms are carried out, this sector is expected to achieve only a modest real rate growth of about 2-3% per annum.

(2) Transport: is the second largest contributor within the tertiary sector, behind commerce. Transport activities reflect Benin's role as "entrepôt" for landlocked countries such as Niger and Burkina Faso. Despite major efficiency gain by PAC through improvement in its statistics and computerization of its accounting system, throughput is continuously declining due, in part, to the total failure of the Beninese banking system. Present and future action programs, with the support of the Bank and other donors, are directed at improving the competitiveness of the country's route to landlocked countries: (a) organize and streamline the operations of Fonds Routier; and (b) rehabilitation and maintenance of the roads system, and improvement in rail traffic both in passenger and freight forwarding.

(3) Public administration and other services: Data at hand show that historical contributions of this sector have been quite important. However, this was partly due to the large number of public and para-public bodies and/or enterprises engaged in the sector rather than efficiency gain in the delivery of services. The on-going privatization program and future limitations of public entities to core essential public services will progressively reduce the size of this sector. Real growth rate in the purely public administration is estimated to be in the neighborhood of 1 to 2 percent at the best in the medium- to long-term.

d. Net Indirect Taxes & GDP at Market Prices

(1) Indirect business taxes: less subsidies is computed, as in the RMSM, as a percentage share of total GDP at factor cost. In Benin, this average percentage share was between 7 and 10 percent over the 1980-87 period. Having been on the low side recently, according to estimates, the current tax reform and other industrial incentives are aimed at increasing tax buoyancy and thereby increasing the above ratio to the 10 to 12 percent range.

(Eq Nat5)            Indirect Taxes = %share \* GDP at f.c.

(2) GDP at market prices: is simply computed as the sum of GDP at factor cost plus net indirect taxes. The term GDP without any other qualifications generally refers to real GDP at market prices. As previously mentioned, the aimed of the on-going economic reforms is to raise this economic aggregate so that its average rate of increase per annum parallels that of population in the medium-term. As clearly depicted by Chart 1 (Sectoral Components of Real GDP), more than 80 percent of total value-added at market prices is provided by the agricultural primary and tertiary [mainly commerce and transit trade] sectors. Even though a dynamic privatization program and other industrial incentives are expected to increase the share of the industrial secondary sector in the long-run, no fundamental structural changes in GDP composition can be escompted in the medium-term.

(Eq Nat6)            GDP m.p. = GDP f.c. + Net Indirect Taxes

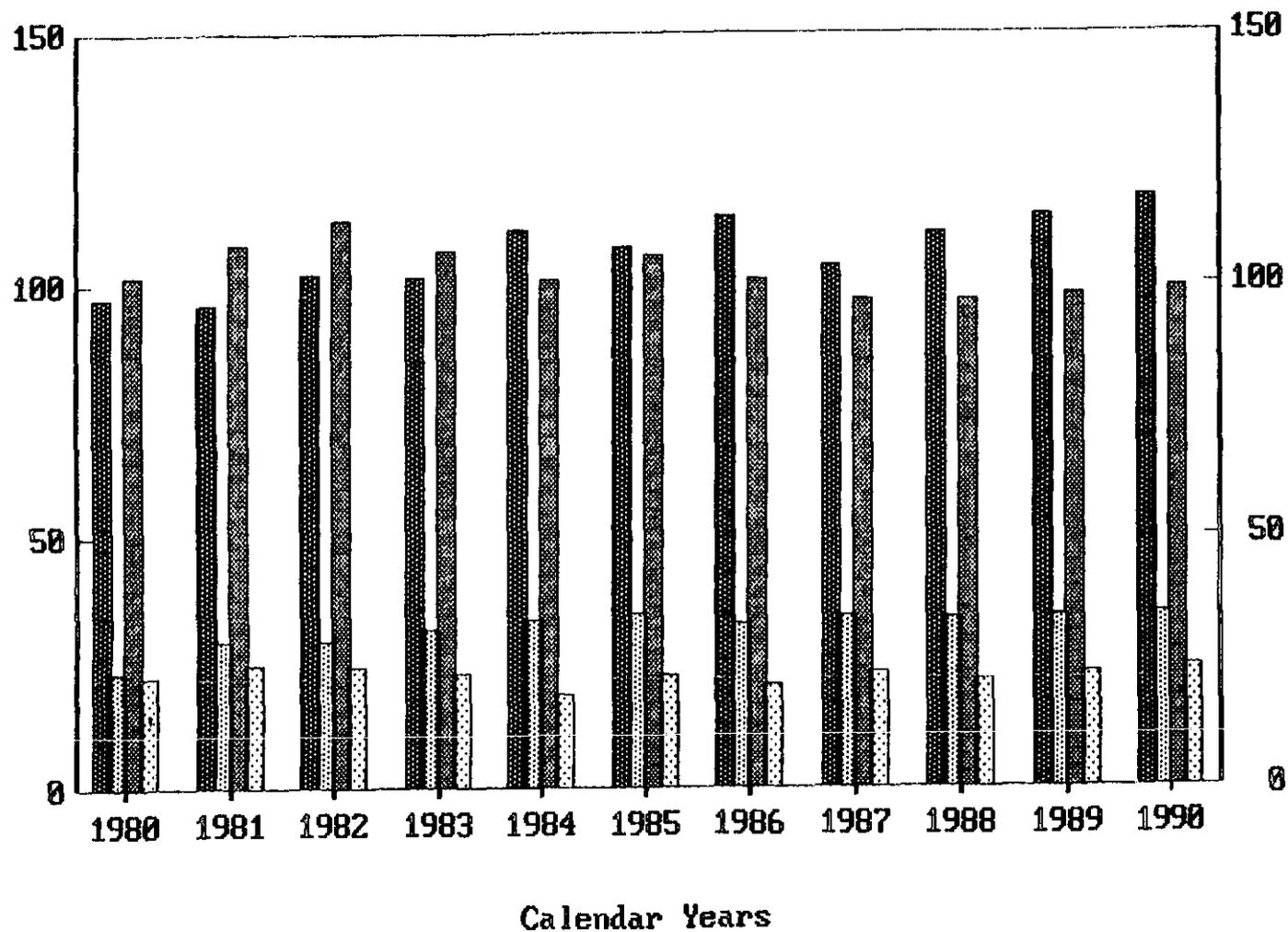
e. Other National Account Aggregates

(1) External Trade Data: National accounts data in Benin are merely crude estimates, especially for the external sector. For this reason and others constraints, a deliberate choice has been made here to use the little more reliable trade statistics are recorded by customs and reported by the central Bank (BCEAO) in the balance of payments; even though one knows that the equality of trade statistics between these data sources -- GDP and BOP -- is purely accidental due mainly to differences in methodologies. Therefore, please refer to section II. (3) which deals explicitly with external trade and balance of payments.

(2) Consumption: The overall basic [residual] real consumption function of the standard RMSM model is also used here. Total consumption (C) is endogenously computed so that total domestic demand (C + I) is equal to the sum of i) total value-added (GDP) plus net imports (NM), i.e. imports of goods and non-factor services (MGNFS) less exports of goods and non-factor services (XGNFS). Real Government Consumption (GC) is [as of now] obtained by an exogenous annual rates of growth that is often used as a policy variable to control future trends in public consumption. Once the full public finance module has been built [next stage], however, public consumption will be determined from public current expenditures. The truly residual variable is therefore real private consumption obtained after subtracting public consumption from the endogenous total consumption.

(3) Particular attention is paid to the resulting growth rate of private consumption so as not to drastically reduce the per-capita consumption [one of the Bank preferred indicators]. Keeping in mind that population and family planning issues are still very sensitive topics in the Third World --- despite the almost universal "agreement about strong linkages between poverty, high population growth, and environmental degradation" [quoted from Mr. Conable's letter to Staff dated October 10, 1989] ---, not much should be expected from this front in the short- to medium-term when looking at ways and means to increase per-capita production, income, or consumption. Historically, estimated current

**Sectoral Components of Real GDP**  
 (In Constant 1980 CFA francs, billion)



-  Primary Sector Production
-  Secondary Sector Production
-  Tertiary Sector Production
-  Net Business Indirect Taxes

consumption data series are available. Therefore, an implicit consumption deflator is derived from the above endogenous constant series. Projected increases in the implicit GDP deflator are also used for consumer price changes.

$$\begin{aligned}
 (\text{Eq Nat7}) \quad C + I &= \text{GDP} + (\text{MGNFS} - \text{XGNFS}) \\
 (\text{Eq Nat8}) \quad \text{GC} (t) &= \text{GC} (t-1) * \text{exog. gr\_rate} \\
 (\text{Eq Nat9}) \quad \text{PC} (t) &= C (t) - \text{GC} (t) \\
 (\text{Eq Nat10}) \quad \text{CPI} &= \text{CPI} (t-1) * \text{exog. gr\_rate} \\
 (\text{Eq Nat11}) \quad \text{Nominal C} &= \text{Real C} * \text{CPI}
 \end{aligned}$$

(4) Investment: Here again, the standard investment function of the RSM model is used for lack of detailed breakdowns of public and private investment data at this time. Total investment is determined by its two components: fixed capital formation (IFIXED), and net changes in stocks. While the latter is assumed to represent a variable proportion of the first difference in real GDP at market prices [proportions are based on historical information], fixed capital formation is computed based on two estimates: i) a proxy-economywide incremental capital to output ratio (ICOR); and ii) a fixed capital stock. Needless to say that those are only rough estimates of unknown parameters.

(5) Based on historical data, it is estimated that about 80 percent of total investment over the 1980-87 period is from public resources (including the para-public sector) and that ratio has fallen recently. A reasonable short- to medium-term strategy would be to raise this share back to its original level, and then projecting a commending role of the private sector in the long-run when most of the structural impediments in the economy would have hopefully been removed. An small improvement done in the RSM model for Togo will be attempted here when more public investment series are available: an establishment of a link between capital expenditures, on the one hand, and public investment program and its financing (PIP), on the other hand. This refinement will also help in the estimation of a more reliable ICOR.

$$\begin{aligned}
 (\text{Eq Nat12}) \quad \text{IFIXED} &= \text{Coef. A1} * \text{Real GDP} + \\
 &\quad \text{Coef. A2} * \text{first difference of real GDP} + \\
 &\quad \text{Capital stock K} \\
 (\text{Eq Nat13}) \quad \text{Stocks Chges} &= \% \text{share} * \text{first difference of real GDP} \\
 (\text{Eq Nat14}) \quad \text{Total Inv. (I)} &= \text{IFIXED} + \text{Changes in Stocks} \\
 (\text{Eq Nat15}) \quad \text{Public Inv} &= \% \text{share} * \text{total fixed investment} \\
 (\text{Eq Nat16}) \quad \text{Nominal Inv.} &= \text{Real Invest. I} * \text{implicit GDP deflator}
 \end{aligned}$$

(6) Other National Accounts Variables: including i) Gross Domestic Savings (GDS); ii) Gross National Savings (GNS); iii) Gross National Product (GNP); and finally iv) Gross National Income are computed using the standard national income accounting relationships as underlined in the RSM model (see appropriate manual for reference). Once again, with the continued absence of a viable banking system in Benin for the past two years, it does not come as a surprise that the current savings to GDP

ratios are rather on the negative side. In the medium-term and with the implementation of sound economic reform measures, it is hoped that gross national savings to GDP ratio will reach some 3-5 percent, and then gradually increase to about 10-15 percent in the long-run (see appendix table 2.4).

(7) GNP per Capita using the Atlas Methodology: is the technique used by the World Bank Group. Results of these computations are extremely important since they are used to determine IDA lending eligibility. With the economic downturn in number of large middle-income countries and decreasing per capita IDA resources, this economic indicator -- used as a proxy for economic and social welfare measurement -- is coming to be carefully scrutinized more often than in the past.

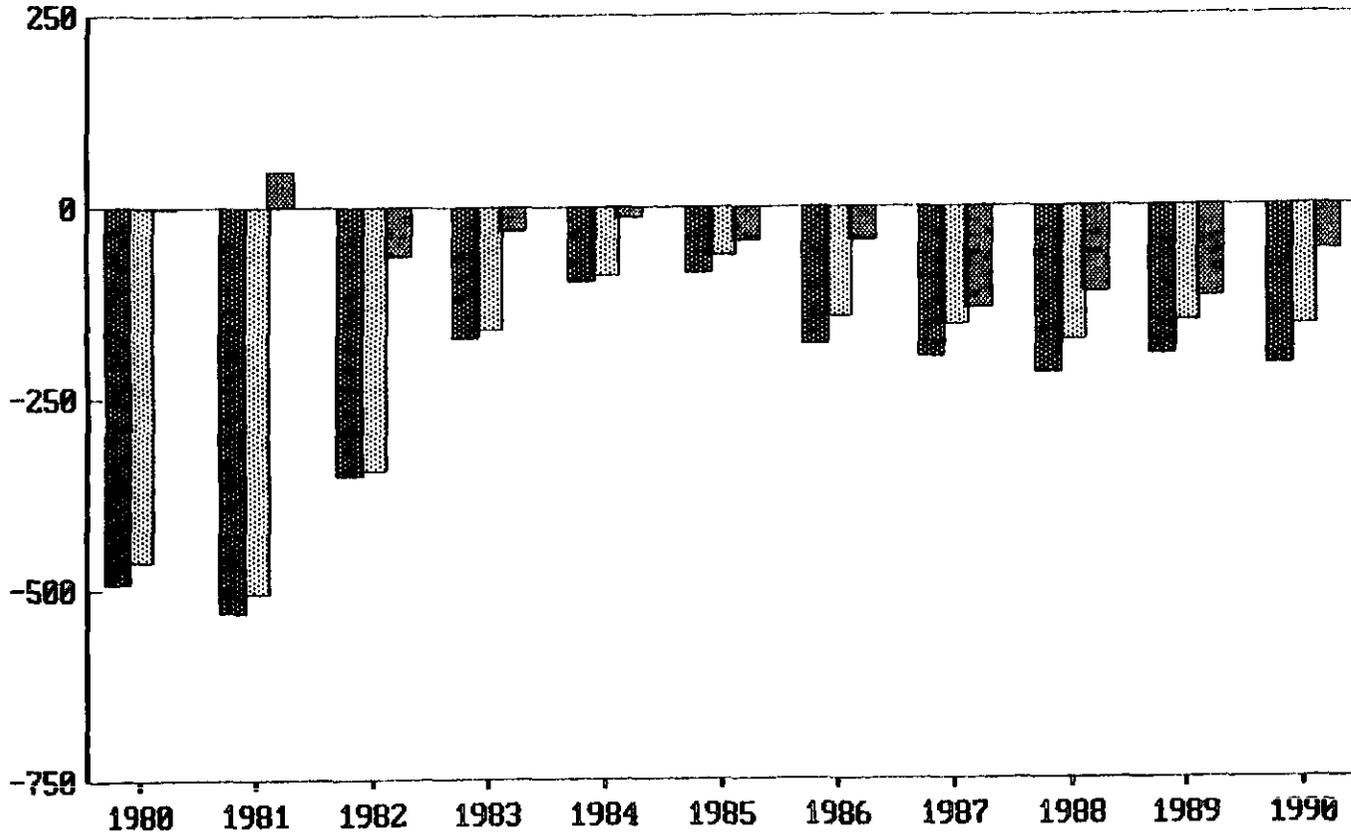
### 3. External Trade and Balance of Payments

Although the coverage of balance of payments statistics is somewhat better than that of national production and income, official beninese balance of payments (BOP) data should be interpreted with caution. Over the 1980-83 period, the average ratio of current account deficit (excluding official grants) to GDP stood at about 15-20% while investment to GDP ratio reached some 30 percent. Subsequent improvements in the trade balance, due in part to i) reduction in imports through cut in capital expenditures; and ii) increased exports of cotton and crude oil, cut the ratio of BOP deficit to GDP by half to a low 8-9% over the 1985-87 period. More recently, the external balance has remained a major problem because of i) drastic deterioration in the external terms of trade; and ii) rising debt obligations causing rapid accumulation of external arrears estimated at US\$ 293 million at end-1988 (see Chart 2: Balance of Payments Indicators 1980-90, in current \$). Generous debt relief with savings estimated at about US\$300 million was recently negotiated through the Paris Club (more about this in the capital and external debt section).

#### a. Commodity Exports

Despite estimated recent losses in competitiveness in regional transit trade, Benin will need to rely heavily on manufacture re-exports revenues. Available trade statistics show a continuously increasing share of re-exports in total commodity exports, with an average of about 30 to 35 percent over the 1984-87 period (see Chart 3: Value of Main Exports Commodities, \$ current). In the short- to medium-term, it is projected that this ratio will increase to some 50 to 60 percent. Based on targeted [exogenous] rates of real growth based upon sectoral developments and expectations, and the IEC forecasted international commodity prices (International Commodity Division, IBRD), the value of each commodity is computed by simply multiplying quantities by prices in CFA francs terms. This is already a great improvement over the RMSM model which, not only has very few tradeable categories, but uses base year current and constant data on one hand, and increments in volume and prices, on the hand. In that

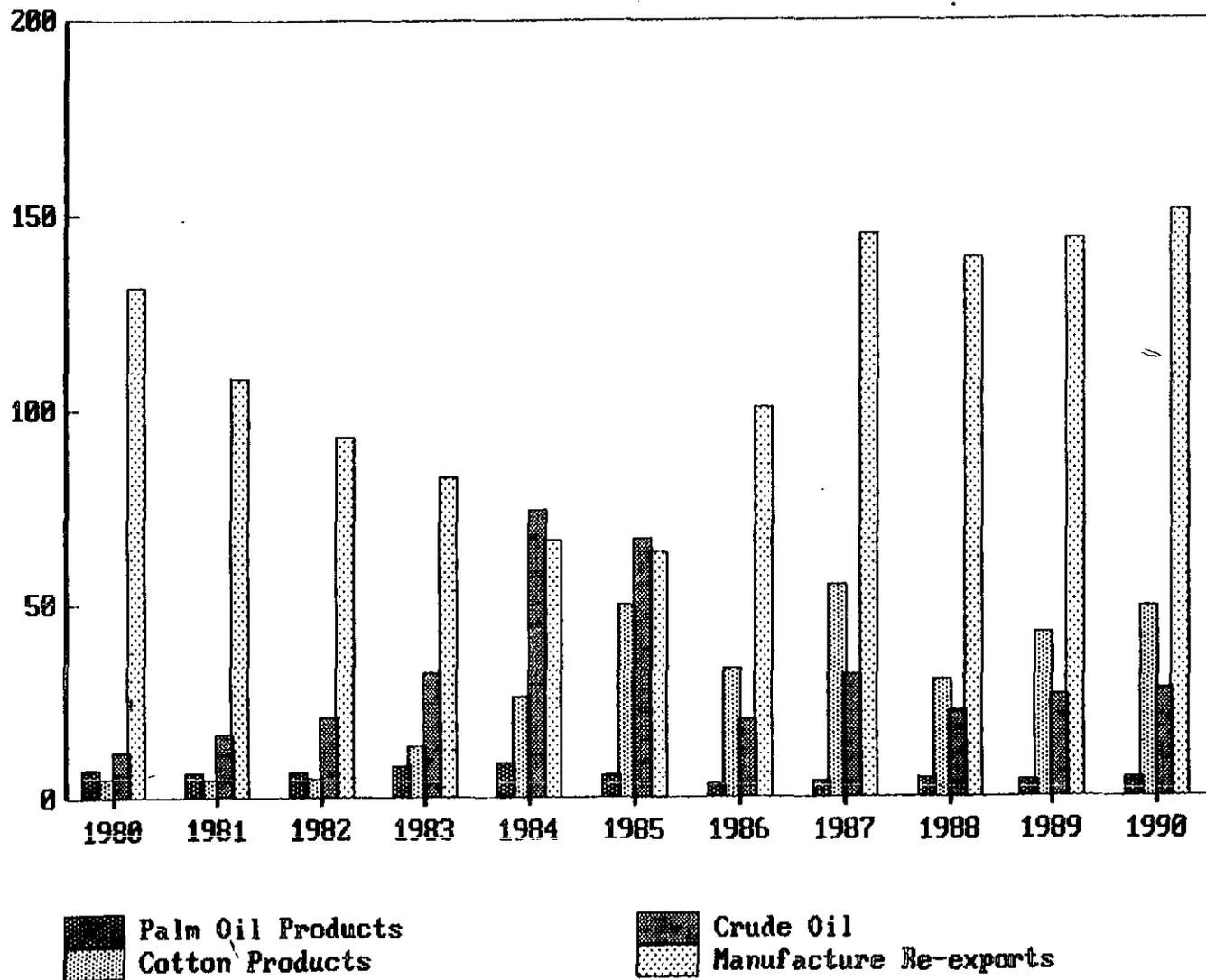
Chart 2  
 Benin: Balance of Payments, 1980-90  
 (In Current US\$, million)



Calendar Years

 External Resource Balance  
 Current Account Balance, excl. transf.  
 Overall Balance

Chart 3: Benin Value of Main Export Commodities  
(In Current US Dollar, Million)



sense, the RMSM is unable [without additional manual calculations] to tell you the projected price, say \$x/kg, of any traded good within the projected period. After a major price boom for most of Benin's export crops over the 1983-85 period, there was a devastating price shock in 1986, especially for cotton products (see Chart 4: Producer and Export Price Differential for cotton and oil palm products). Value and volume are cumulated per year to give total exports of goods. For each commodity i, we have:

(Eq EXP1)	$Q_i(t) = Q_i(t-1) * \text{target rate of growth}$
(Eq EXP2)	$P_i(t) = P_i(t-1) * \text{exog. g\_rate (IEC derived)}$
(Eq EXP3)	$V_i(t) = Q_i(t) * P_i(t)$
(Eq EXP4)	Value of goods exp. = Sum over i of $V_i(t)$
(Eq EXP5)	Volume of goods exp. = Sum over i of $Q_i(t)$

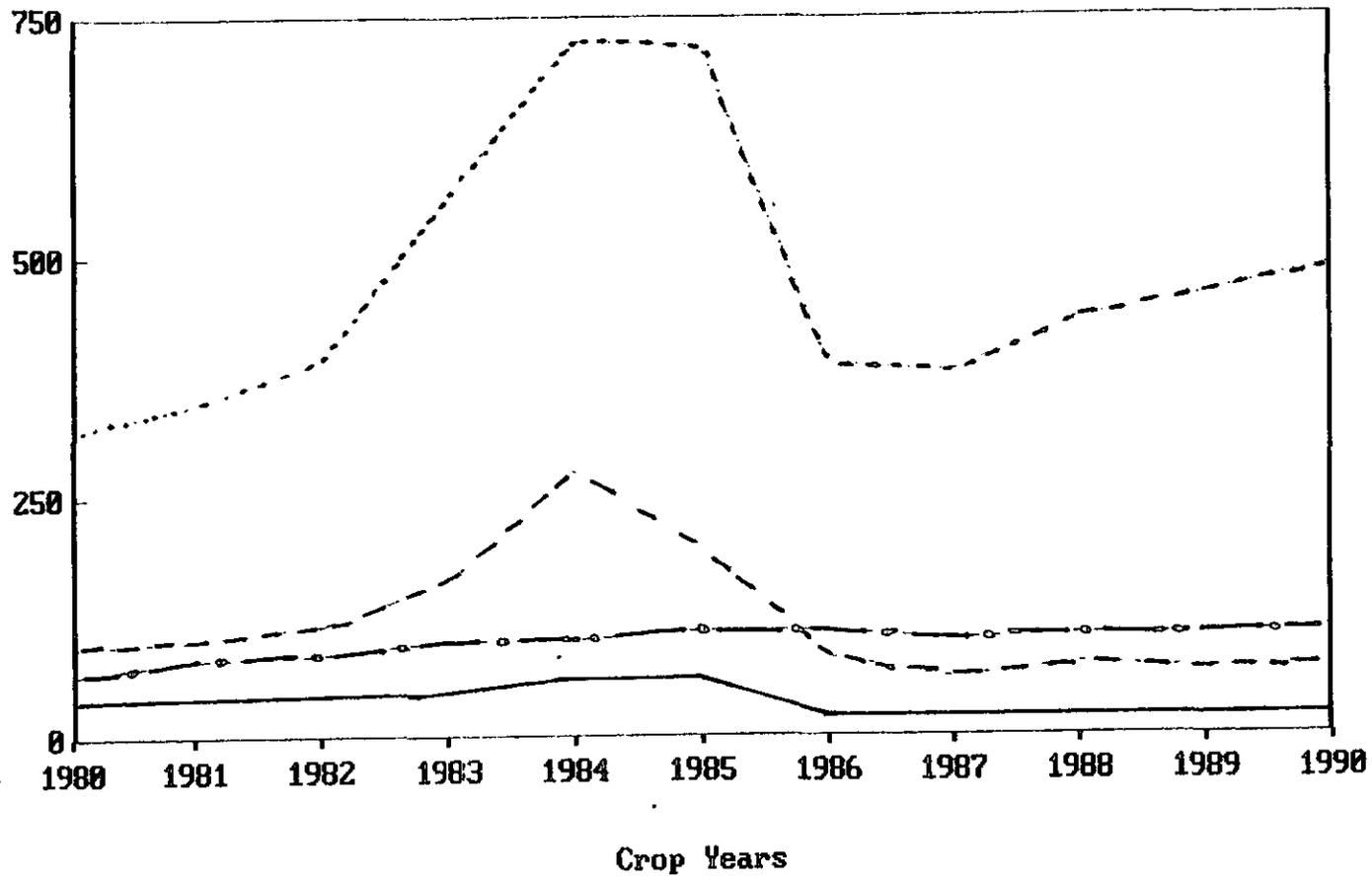
(1) Oil palm products: are composed of palm oil, palm kernel oil, and palm kernel cake. Together, palm oil products contributed some 8 percent of total goods exports in 1988, excluding the most important source of exports receipts, i.e. manufacture re-exports. The most important item in this category is palm oil. Future prospects in its price trends are fairly good despite their currently low levels due to three successive shocks in the 1985-87 period.

(2) Cotton and cotton products: are the most important primary export sector. Consisting mainly of ginned cotton, the sector accounted for more than 35 percent of primary commodity export earnings in 1988. With the tremendous increase in cotton output estimated at 105 thousands tons in 1988, ginning capacity and efficiency is becoming a major sectoral constraint. Based on an estimated ginning ratio of 40.5 percent and total ginned cotton export volume of only 21 thousand tons in 1988, stock accumulation and/or domestic ginned cotton sales stood at more than 20 thousand tons. In the short-term, it is expected that stocks will continue to accumulate until such time when the combined effects of the following developments will drive them down and hopefully nullify them in the medium-term: i) gradual levelling of cotton output growth; ii) major efficiency and competitiveness gains in cotton processing and marketing; and iii) [hopefully] increased in Benin's regional and international market shares. Assuming that the ginning ratio will be stable at 40.5 percent, and based on targets output and export growth, cotton stocks changes and/or domestic sales are residually obtained as follows:

(Eq EXP6)	Output $Y(t) = Y(t-1) * \text{exog\_rate of growth}$
(Eq EXP7)	Total Ginned Cotton = $Y(t) * \text{exog. gin\_ratio (40.5\%)}$
(Eq EXP8)	Ginned Cot. Exp. $V(t) = V(t-1) * \text{exog\_rate of growth}$
(Eq EXP9)	Dom. Sales/Stocks $(t) = \text{Total Gin. Cotton less exports}$

(3) Crude oil: prospects suffer major setbacks starting in 1986 due to the compounded effects of : i) both lower volume and international prices; ii) an estimated 15 to 20 percent appreciation of the CFA franc vis-à-vis the US dollar; and iii) more importantly, the result of technical problems and a lower-than-anticipated level of physical implementation of the off-shore Sémé Oil project. As previously indicated,

Chart 4: Benin  
 Producer and Export Price Differential  
 (In CFA Francs per Kilogram)



- Average Producer Price - Oil Palm Products
- - - Average Export Price - Oil Palm Products
- Average Producer Price - Cotton Products
- ..... Average Export Price - Cotton Products

the beninese crude oil output has declined more than 40 percent from a high 385 thousand tons in 1984 to a low 230 thousand tons in 1988, or only 1.6 million barrels equivalent.

(4) Other agricultural exports: are essentially coffee and cocoa. With a combined output of about 6.7 thousand tons and CFAF 5 billion of export revenue in 1980, coffee and cocoa production has dropped to less than one thousand tons, and less than 2 percent of total revenue from commodity exports in 1988. Even though emphasis is being placed on rehabilitation of existing plantations and creation of new ones, the future outlook for these traditional export crops are particularly bleak in terms of international prices. The recent breakdown of the International Coffee Agreement (ICA) and the extremely low and dropping cocoa prices make investment in these sectors extremely unattractive in the short-term; they should, indeed, probably be discouraged.

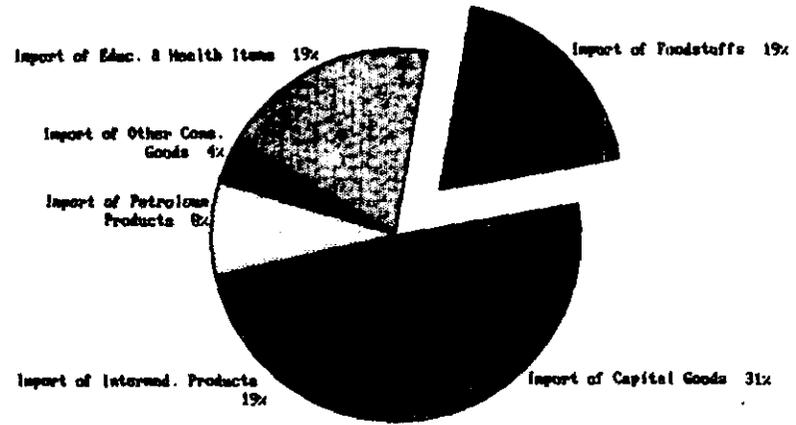
(5) Manufacturing re-exports: account for more than 40 percent of Benin's total exports earnings in 1988. As indicated above, the upward trends in terms of its future contributions firmly confirm the necessity to: i) re-dynamize the sector; and ii) increase the role of Benin as the regional "entrepôt" in regional as well as international trade, if the economic downturn is to be reversed. As noted elsewhere, appropriate actions and reforms are already underway to remove structural impediments and constraints to trade, and effectively increase efficiency at the deep-sea port of Cotonou.

#### b. Commodity Imports

(1) Most of what is already said above about trade equally applied to both recorded exports and imports. However, imports need special treatment for various reasons: i) they need to be paid for and they are always expensive; and most importantly ii) their composition should be tailored to the socio-economic development needs of the country. For Benin, the importance of transit trade that is not systematically separated from domestic needs makes the import statistics analysis and interpretations very difficult. Nevertheless, historical records show a particularly disturbing trends in the sense that in 1980, capital goods imports for productive investment accounted for some 30 percent of total goods imports, while import of foodstuffs amounted to about 19 percent. In 1988, the same percentage shares are estimated at 23 and 26 percent [or CFA francs 28 and 32 billion] respectively (see Chart 5: Goods Import Structure, as percentage of total for selected years). Moreover, in terms of total food consumption, is estimated that only 65 percent of it was domestically produced. In a small and primarily agricultural country such as Benin, this kind of trends are most disconcerting.

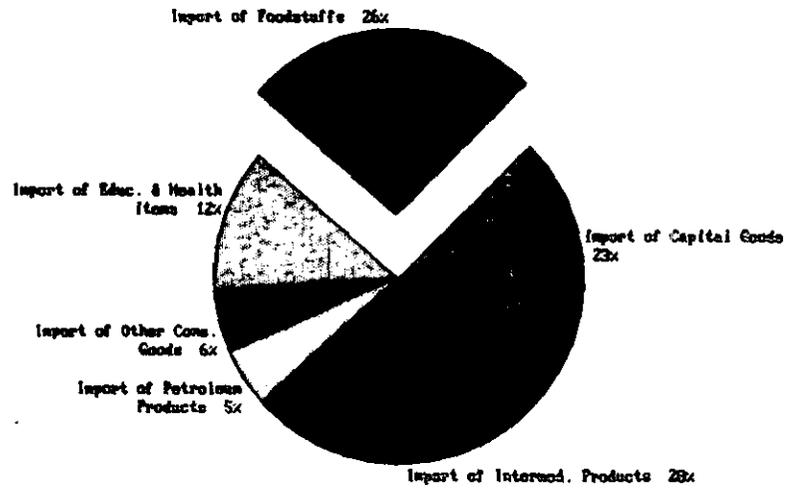
(2) In order to better focus sectoral policies, total commodity imports are divided into six categories: i) foodstuffs; ii) education and health related items mainly comprised of pharmaceuticals,

Chart 5: Benin: Goods Import Structure  
(Percentage Share of Total)



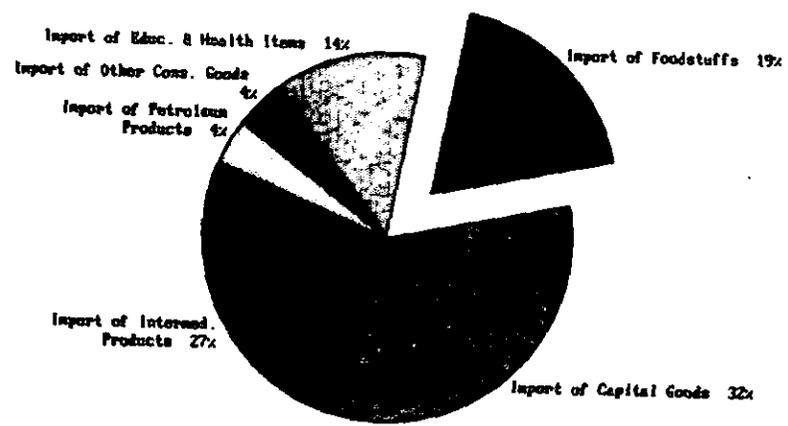
1988

Benin: Goods Import Structure  
(Percentage Share of Total)



1989

Benin: Goods Import Structure  
(Percentage Share of Total)



1997

books, paper and other educational and health related consumer products; iii) other general consumer goods; iv) oil and petroleum products; v) intermediate goods; and finally vi) capital goods imports for productive investment. This decomposition is already a noticeable improvement over the standard RMSM framework in terms of policy as will be discussed shortly.

(3) Import of foodstuffs: Effective reduction in this category of imports is the cornerstone of any viable medium-term rural development strategy in Benin, as have concluded several agricultural, food security, and other poverty alleviation papers. In real terms, foodstuffs import is residually obtained as the difference between the need for food consumption [dictated by population growth] and total domestic supply of foodstuffs. The tremendous increase in food imports despite the actual decline in per-capita food consumption over the 1980-87 period is explained by: i) a steady increase of over 3 percent per annum in population; and ii) a relatively small [almost insignificant] average increase of in domestic food production, although the trends are rather up lately. With a target rate of growth of 1-2 percent in food consumption over population growth, and given the expected potential of foodstuffs production, it is projected that food imports will steadily increase a little more than population in order to restore an adequate level of per-capita food consumption in the next 2-3 years; and then gradually decrease at an increasing rate over the medium-term (see table 3.3). Computations involve the following equations:

$$\begin{aligned} \text{(Eq IMP1)} \quad C\_Food(t) &= C\_Food(t-1) * \text{target rate of growth} \\ \text{(Eq IMP2)} \quad Y\_Food(t) &= \text{(same as Eq Nat1) in production sector} \\ \text{(Eq IMP3)} \quad I\_Food(t) &= C\_Food(t) \text{ less } Y\_Food(t) \text{ (domestic)} \end{aligned}$$

(4) Education and health items: can be classified as social goods which mostly benefit the poorest segment of population, and therefore cannot be drastically cut if the objective of protecting the most vulnerable groups under the economic reform program is to be achieved. The percentage share of this category in total goods imports dropped from 19 percent in 1980 to about 12 percent in 1988. Despite the general import restraints and cuts needed for short-term stabilization, the aim is keep this share stable at around 12-13 percent before envisaging a gradual increase to 14-15 percent in the medium- to long-term. In order to achieve this objective, an average real rate of growth of 1 to 2 percentage points [per-capita rate of growth] above that of population should be considered the appropriate policy target.

$$\text{(Eq IMP4)} \quad \text{Educ\_Health Import}(t) = E \& H \text{ Import}(t-1) * \text{target } g\_rate$$

(5) Other consumer goods: are the prime target for cuts in these difficult periods of economic stabilization and adjustment. Historical proportions in total goods imports have been quite small, standing at around 5 percent over the 1984-87 period. Over the short-run, an assumption of no real growth, i.e. growing with inflation in nominal terms, has been assumed for this general consumer goods import category.

$$\text{(Eq IMP5)} \quad \text{Oth Conc Gds Imp.}(t) = \text{OTHCONS}(t-1) * \text{exog. } g\_rate$$

(6) Oil and petroleum products: are also of relatively minor importance in total import bills for Benin. Had expectations about the Sémé oil project been realized, the country would have been importing little or no oil, except manufacture oil and petroleum related products. However, due mainly to incertitude over the sector and the performance of operating industrial units, it is difficult to clearly discuss a strategy to be following [or being followed?] at this time. I leave this open to discussions and remarks, especially from the Industrial and Energy Division (AF1IN). Import of oil and petroleum products are projected as a share of total real value-added at market prices (GDP). Based on historical value, this share dropped on average from 5 percent over the 1981-85 period to about 2 percent in the 1986-88 period. It is assumed that it will be stable at 2 percent over the medium-term:

$$(Eq\ IMP6) \quad Oil\ Import\ (t) = Oil\ import\ (t-1) * \%share\ of\ GDP\ m.p.$$

(7) Intermediate and capital goods: are generally the most difficult import items to project. As I mentioned earlier, capital goods imports for productive investment will be derived in the future from the Public Investment Program (PIP) when enough disaggregated data is made available. With continuous progress being made at the Ministry of Plan, I have no doubt that this task will be possible in the near future. However, that much cannot be said about intermediate goods. Consequently, I have kept the standard RMSM model derivation of i) intermediate goods imports through an elasticity with respect to industrial value-added; and ii) capital goods imports through an elasticity with respect to gross fixed capital formation (IFIXED). The extremely wide range of historical values for these elasticities clearly indicates the inadequacy of such treatment.

$$(Eq\ IMP7) \quad Inter.\ goods\ import\ (t) = Inter.\ goods\ imp.\ (t-1) * \\ (1 + elast./Y_{industry}) * \\ \% \text{ change in } Y_{industry}$$

$$(Eq\ IMP8) \quad Capital\ goods\ import\ (t) = Cap.\ goods\ import\ (t-1) * \\ (1 + elast./IFIXED) * \\ \% \text{ change in } I_{FIXED}$$

$$(Eq\ IMP9) \quad Total\ real\ import\ (t) = \text{Sum over the six sectors}$$

$$(Eq\ IMP10) \quad Nominal\ imp.\ (i) = Real\ Imp.\ (i) * Import\ Price\ Defl.$$

### c. External Terms of Trade

(1) As clearly illustrated by the annex table 3.6, Benin performed quite well in terms output volume of tradeable primary commodities, especially in the cotton sector. Unfortunately, price fluctuations were extremely unfavorable. Using 1980 as based year, the composite output index stood at 325.2 in 1987 while that of average price dipped to a low 58.9 for the same year. During the same period, the average

import price index increased to 112.8, leading to a about 50 percent loss in the external terms of trade index. Even though future prospects give an indication of a moderate recovery, not much can be expected in the medium-term. The only alternative left for Benin in its attempt to regain and maintain a competitive edge will be i) major efficiency gains in all the exportable sub-sectors; and thereby ii) reduction in the unit cost of output and therefore, increase in income via exports, ceteris paribus.

d. Non-Factor Services

(1) Despite recent improvement in the services balance [as indicated by the data at hand], Benin needs to make a special effort to cut down [through bilateral negotiations, maybe?] the increasing costs of freight and insurance on its commodity imports (see annex table 3.4). Improvements can also come from added revenues in transport services, the largest source of receipts in the services account. Other relatively minor areas include travel, government official operations [whatever that includes], and other services. Special attention needs to be accorded to the contents of "government official operations" for determining whether or not these are a mixture of non-factor as well as factor services [I know by experience that we have the same problem of classification for Togo].

e. Factor Services and Transfers

(1) Due to special problems and treatments related to the external debt service (to which the bulk of factor services are linked) the discussion of this section will not be covered in this issue, but in the next one, expected in June 1990. In addition the important section of "External Debt & Capital, and Foreign Aid" will also be left out for this time.

4. External Debt & Capital, and Foreign Aid

(to be completed)

5. Public Finance

a. As mentioned earlier, this is a new block in terms of standard Bank medium-term projection models. The missing public finance module in the RMSM is one of the most serious shortcomings of that model. Therefore, special attention needs to be observed before one put forth an acceptable public sector that takes into account i) specific country organization of public accounts; and ii) institutional flows of information between all the agencies that constitute the "accounting unit" of central government and/or para-public sector.

b. In the case of Benin, the public sector comprises the central government, six administrative provinces sub-divided into numerous districts and communes, and about 50 to 60 public enterprises. Generally speaking, the financial operations of the central government will refer to the following: a) the Treasury; b) the CAA; the FNI; c) Road Fund (Fonds Routier); d) the Stabilization Fund (FAS); e) the Social Security Funds (OBSS); and f) various extrabudgetary expenditures directly financed from external donors.

c. For all these reasons, this section will need more time and resource to develop and therefore will be deferred until the next issue of ECOBENIN when benefits can be obtained from various models, including the new extended version of the RMSM model that is referred to as RMSM-X. Efforts are underway to implement RMSM-X for Cameroon based on the existing version for Zimbabwe (CECMG, September 15, 1989).

- d. The Central Government:  
(to be completed)
  - e. The Para-Public Sector  
(to be completed)
  - f. The Consolidated Public Sector Operations  
(to be completed)
6. Public Investment Programming  
(to be completed)
7. Money and Banking:  
(to be completed)

-----TABLE 2.1 BENIN: GROSS DOMESTIC PRODUCT BY SECTOR OF ACTIVITY-----  
 -----(In Current CFA Francs, billion)-----

	-----ACTUAL-----					-----ESTIMATES-----		-----SHORT-TERM-----			-----LONG-TERM-----	
	1980	1984	1985	1986	1987	1988	1989	1990	1991	1992	1995	2000
Primary Production	97.5	178.7	180.5	201.0	188.7	202.5	218.2	235.2	254.0	274.6	351.9	575.2
Agriculture	60.0	125.1	124.4	147.8	141.2	154.1	167.8	181.7	197.4	214.7	282.6	480.5
Food Crops	46.0	97.5	91.5	112.5	107.0	117.5	128.3	140.1	153.0	167.1	223.6	391.5
Fruits & Vegetables	9.3	18.1	18.6	21.6	19.7	20.7	22.1	23.7	25.4	27.5	34.8	53.4
Cash Crops	4.7	11.4	14.4	13.7	14.5	15.9	16.9	17.9	19.0	20.1	24.3	35.6
Other Primary Production	37.5	53.6	58.1	53.2	47.5	48.5	50.9	53.5	56.6	60.0	69.2	94.7
Livestock	30.6	46.5	48.7	45.5	40.0	40.9	43.0	45.2	47.9	50.8	58.9	81.5
Forestry	3.3	3.4	3.5	3.5	3.2	3.1	3.2	3.4	3.6	3.8	4.2	5.4
Fisheries	3.6	3.7	4.0	4.2	4.3	4.4	4.7	4.9	5.1	5.4	6.1	7.8
Secondary Sector Production	23.2	63.1	75.9	57.2	64.4	68.3	71.8	74.8	78.5	82.3	96.2	130.2
Mining	0.8	23.9	27.8	9.9	8.3	5.1	5.4	5.6	5.9	6.2	7.3	10.2
Manufacturing	11.8	18.5	21.1	18.4	25.0	30.5	32.0	33.3	35.0	36.8	43.1	59.0
Construction	10.0	17.1	23.4	24.6	26.8	28.3	29.7	30.9	32.3	33.8	39.2	52.2
Electricity & Water	1.1	3.6	3.6	4.3	4.3	4.4	4.7	4.9	5.2	5.5	6.6	8.9
Tertiary Sector Production	102.0	203.2	219.6	218.5	223.6	238.0	250.9	262.1	274.9	288.5	335.9	450.2
Commerce	59.3	84.1	93.8	93.9	96.6	105.6	110.9	115.4	121.2	127.4	149.2	203.4
Transport	14.2	72.6	78.2	76.6	78.8	83.7	88.7	93.2	98.0	102.9	119.9	160.4
Public Administration	19.4	38.5	38.8	39.3	39.3	39.3	41.3	42.9	44.7	46.5	52.8	67.6
Other Services	9.1	8.0	8.8	8.6	8.9	9.4	10.0	10.5	11.0	11.7	14.0	18.8
Value-added at Factor Cost	222.7	445.0	476.0	476.7	476.7	508.8	540.9	572.0	607.4	645.4	784.0	1155.6
Net Indirect Taxes	22.3	21.4	26.0	25.8	26.2	25.2	27.9	30.3	33.3	38.8	47.0	81.6
Current GDP at Market Prices	244.9	466.4	502.0	502.5	502.9	534.0	568.8	602.3	640.7	684.2	831.0	1237.2
Memorandum Items:												
	(in percentage of current GDP at m.p.)											
Primary Sector Production	39.8%	38.3%	36.0%	40.0%	37.5%	37.9%	38.4%	39.0%	39.6%	40.1%	42.3%	46.5%
Secondary Sector Production	9.5%	13.5%	15.1%	11.4%	12.8%	12.8%	12.6%	12.4%	12.2%	12.0%	11.6%	10.5%
Tertiary Sector Production	41.6%	43.6%	43.7%	43.5%	44.5%	44.6%	44.1%	43.5%	42.9%	42.2%	40.4%	36.4%
Net Indirect Taxes	9.1%	4.6%	5.2%	5.1%	5.2%	4.7%	4.9%	5.0%	5.2%	5.7%	5.7%	6.6%

Sources: Official government data;  
 Bank staff estimates & projections.

-----TABLE 2.2 BENIN: GROSS DOMESTIC PRODUCT BY SECTOR OF ACTIVITY-----

----- (In Constant 1980 CFA Franca, billion) -----

	-----ACTUAL-----					-----ESTIMATES-----		-----SHORT-TERM-----			-----LONG-TERM-----	
	1980	1984	1985	1986	1987	1988	1989	1990	1991	1992	1995	2000
Primary Production	97.5	111.2	107.7	113.6	103.9	110.4	113.9	117.6	121.7	126.2	145.8	200.8
Agriculture	60.0	74.2	73.9	75.0	65.4	70.6	73.7	77.0	80.4	84.1	101.3	148.3
Food Crops	46.0	56.7	55.9	54.9	47.9	52.5	55.1	57.8	60.7	63.8	78.1	118.0
Fruits & Vegetables	9.3	11.2	11.5	12.1	12.1	12.6	12.9	13.3	13.7	14.3	16.5	21.9
Cash Crops	4.7	6.3	6.5	8.0	5.4	5.6	5.7	5.8	5.9	6.0	6.7	8.4
Other Primary Production	37.5	37.0	33.8	36.6	36.5	39.8	40.2	40.6	41.3	42.1	44.5	52.5
Livestock	30.6	30.8	28.1	32.8	32.6	33.8	34.1	34.5	35.1	35.8	38.0	45.4
Forestry	3.3	2.9	2.9	2.9	2.8	2.9	2.9	2.9	3.0	3.0	3.1	3.4
Fisheries	3.6	3.3	2.8	3.1	3.1	3.1	3.2	3.2	3.2	3.3	3.4	3.7
Secondary Sector Production	23.2	33.6	34.8	32.7	34.1	33.9	34.2	34.6	35.3	35.9	38.5	45.0
Mining	0.8	10.8	10.5	7.0	6.7	6.4	6.5	6.6	6.7	6.8	7.4	8.8
Manufacturing	11.3	10.2	9.6	11.1	11.1	11.2	11.3	11.4	11.6	11.9	12.7	15.0
Construction	10.0	10.3	12.6	12.3	13.8	13.8	13.9	14.0	14.3	14.5	15.4	17.6
Electricity & Water	1.1	2.2	2.1	2.4	2.5	2.5	2.5	2.6	2.7	2.6	3.0	3.6
Tertiary Sector Production	102.0	101.1	106.0	101.0	97.2	97.0	98.2	99.4	101.1	103.0	109.7	126.7
Commerce	59.3	54.1	56.7	54.0	52.0	51.6	52.1	52.6	53.7	54.7	58.7	69.0
Transport	14.2	12.2	13.4	12.5	12.3	12.4	12.6	12.9	13.1	13.4	14.3	16.5
Public Administration	19.4	25.0	24.9	25.0	24.5	24.3	24.5	24.8	25.0	25.3	26.3	29.0
Other Services	9.1	9.8	11.0	9.6	8.5	8.8	9.0	9.1	9.3	9.6	10.5	12.2
Value-added at Factor Cost	222.7	245.8	248.6	247.4	235.2	241.3	246.3	251.6	258.1	265.1	294.0	372.5
Net Indirect Taxes	22.3	18.7	22.3	20.6	23.0	21.6	22.9	24.2	25.8	29.2	32.3	48.4
Real GDP at market prices	244.9	264.6	270.9	268.0	258.2	262.9	269.3	275.7	283.9	294.3	326.3	420.9
Memorandum Item:												
	(Annual percentage growth rates)											
Constant Gross Domestic Product	9.7%	0.4%	2.4%	-1.1%	-3.6%	1.8%	2.4%	2.4%	3.0%	3.6%	3.9%	5.8%
Primary Sector		9.2%	-3.1%	6.5%	-8.5%	6.2%	3.2%	3.2%	3.5%	3.7%	5.5%	7.9%
0/w Agriculture		32.0%	-0.4%	1.5%	-12.8%	7.9%	4.4%	4.4%	4.4%	4.6%	7.2%	9.1%
0/w Other Primary Production		-18.9%	-8.6%	14.2%	-0.2%	3.4%	1.0%	1.0%	1.8%	1.9%	1.9%	4.6%
Secondary Sector		5.6%	3.8%	-6.1%	4.2%	-0.6%	1.1%	1.1%	1.9%	1.9%	2.4%	3.5%
0/w which mining	12.4%	103.0%	-2.5%	-34.0%	-3.5%	-4.3%	1.0%	1.0%	2.0%	2.0%	3.0%	4.0%
0/w manufacturing	-1.2%	-11.2%	-6.2%	15.1%	0.7%	0.3%	1.0%	1.0%	2.0%	2.0%	2.5%	4.0%
Tertiary Sector		-5.5%	4.9%	-4.7%	-3.8%	-0.2%	1.2%	1.2%	1.8%	1.8%	2.4%	3.3%
0/w commerce	17.2%	-7.6%	4.7%	-4.8%	-3.7%	-0.7%	1.0%	1.0%	2.0%	2.0%	2.5%	4.0%

-----TABLE 2.3 BENIN: GROSS DOMESTIC PRODUCT BY SECTOR OF ACTIVITY-----  
 -----(Sectoral GDP Price Deflators, Base 1980 = 100)-----

	ACTUAL					ESTIMATES		SHORT-TERM			LONG-TERM	
	1980	1984	1985	1986	1987	1988	1989	1990	1991	1992	1995	2000
<b>Primary Sector</b>												
Agriculture												
Food Crops	100.0	172.1	163.5	204.8	223.3	223.9	232.9	242.2	251.9	262.0	286.3	331.9
Fruits & Vegetables	100.0	143.4	161.7	178.6	182.7	164.6	171.1	178.0	185.1	192.5	210.4	243.9
Cash Crops	100.0	181.7	221.5	171.0	268.5	284.7	296.1	307.9	320.2	333.0	363.9	421.9
Other Primary												
Livestock	100.0	151.1	173.2	139.7	122.6	121.2	126.0	131.1	136.3	141.8	154.9	179.6
Forestry	100.0	118.4	119.3	119.4	113.6	107.4	111.7	116.1	120.8	125.6	137.3	159.1
Fisheries	100.0	112.7	141.4	137.3	140.8	141.4	147.0	152.9	159.0	165.4	180.7	209.5
<b>Secondary Sector</b>												
Mining	100.0	221.1	264.0	142.3	123.7	79.4	82.6	85.9	88.5	91.2	99.6	115.5
Manufacturing	100.0	180.6	219.6	166.4	224.2	272.8	283.7	292.2	301.0	310.0	338.7	392.7
Construction	100.0	165.7	185.2	200.6	194.9	205.5	213.7	220.1	226.7	233.5	255.2	295.8
Electricity & Water	100.0	165.1	173.9	176.2	174.1	176.0	183.0	188.5	194.2	200.0	218.5	253.3
<b>Tertiary Sector</b>												
Commerce	100.0	155.4	165.5	174.0	186.0	204.8	213.0	219.4	226.0	232.7	254.3	294.8
Transport	100.0	594.4	582.2	612.8	642.9	675.8	702.8	723.9	745.6	768.0	839.2	972.9
Public Administration	100.0	154.2	155.9	157.4	160.7	161.7	168.2	173.2	178.4	183.8	200.8	232.8
Other Services	100.0	81.1	79.8	89.8	104.3	107.3	111.6	114.9	118.4	121.9	133.2	154.4
Net Indirect Taxes	100.0	114.2	116.4	125.5	113.8	117.0	121.7	125.3	129.1	133.0	145.3	168.4
Implicit GDP Deflator 1/	100.0	176.3	185.3	187.5	194.8	203.2	211.2	218.4	225.6	232.5	254.6	293.9
Annual percentage growth rate	10.2%	5.8%	5.1%	1.2%	3.9%	4.3%	4.0%	3.4%	3.3%	3.0%	3.1%	3.0%

1/ Endogenous: ratio of current over  
 base 1980 GDP at market prices.

TABLE 2.4 BENIN: NATIONAL ACCOUNTS AT CONSTANT 1980 PRICES

(In CFA France, billion)

	ACTUAL					ESTIMATES		SHORT-TERM			LONG-TERM	
	1980	1984	1985	1986	1987	1988	1989	1990	1991	1992	1995	2000
Gross Domestic Product (mp)	244.9	284.6	270.9	268.0	258.2	282.9	289.3	275.7	283.9	294.3	328.3	420.9
Primary (fc)	97.5	111.2	107.7	113.6	103.9	110.4	113.9	117.6	121.7	126.2	145.8	200.8
Secondary (fc)	23.2	33.6	34.8	32.7	34.1	33.9	34.2	34.6	35.3	35.9	38.5	45.0
Tertiary (fc)	102.0	101.1	106.0	101.0	97.2	97.0	98.2	99.4	101.1	103.0	109.7	126.7
Terms of Trade Effect	0.0	-53.8	-59.1	-54.9	-63.4	-48.6	-50.1	-50.8	-51.8	-51.7	-47.1	-48.9
Gross Domestic Income	244.9	210.8	211.8	213.1	194.8	214.2	219.2	225.0	232.1	242.6	279.2	373.9
Resource Gap	104.2	28.7	18.2	36.3	30.6	33.6	30.8	32.7	34.8	36.7	37.9	31.0
Import of Goods & NFS	181.9	142.0	145.5	139.8	146.6	137.9	140.2	143.7	148.5	153.8	164.0	170.4
Capacity to Import	57.7	113.3	127.3	103.4	115.9	104.2	109.7	111.0	113.7	117.1	128.2	139.4
Export of Goods & NFS	57.7	187.1	188.5	158.3	179.3	152.8	159.8	161.7	165.5	168.8	173.3	186.3
Total Resources Available	349.1	239.5	230.0	249.4	225.4	247.9	249.8	257.7	266.9	279.3	317.1	405.0
Total Consumption	279.0	205.1	194.0	215.8	193.8	216.8	216.3	222.4	228.2	236.2	285.2	322.8
Public	27.1	28.1	27.3	30.3	28.6	26.1	24.8	23.8	23.1	22.6	22.4	24.2
Private	251.9	179.0	166.7	185.5	165.2	190.7	191.5	198.7	205.1	213.6	242.8	298.4
Total Investment	70.1	34.4	36.0	33.6	31.6	31.1	33.5	35.2	38.7	43.1	51.9	82.3
Changes in Stocks	1.0	0.1	0.6	1.5	-1.0	0.9	0.3	0.3	0.4	0.5	0.5	0.7
Fixed Capital Formation	69.1	34.3	35.4	32.1	32.6	30.2	33.2	34.9	38.3	42.6	51.4	81.6
Government and PEs	62.9	27.4	28.3	21.9	21.3	20.2	22.2	23.6	25.8	28.8	34.3	50.8
Private Sector	6.2	6.9	7.1	10.2	11.3	10.0	10.9	11.3	12.5	14.0	17.1	31.0
Gross Domestic Savings	-34.1	5.6	17.8	-2.7	1.0	-2.5	2.9	2.5	3.9	6.3	14.0	51.3
Factor Service Income	6.1	3.9	11.0	11.1	10.2	9.4	10.0	10.7	12.0	13.8	11.5	9.8
Net Current Transfers	1.9	4.2	3.3	3.1	2.6	4.3	0.7	0.7	0.7	0.8	1.0	0.9
Gross National Savings	-26.1	13.8	32.2	11.5	13.8	11.2	13.7	13.9	16.6	20.7	26.5	61.9
Gross National Product	251.0	268.5	282.0	279.0	268.4	272.3	279.3	286.5	295.9	307.9	337.8	430.7
Gross National Income	251.0	214.7	222.8	224.2	205.0	223.7	229.2	235.7	244.1	256.2	290.7	383.7

(Percentage share of GDP)

Resource Gap	42.5	9.3	7.8	12.4	11.9	12.2	10.9	11.0	11.1	11.0	9.8	6.6
Import of Goods & NFS	56.1	31.1	31.1	30.2	32.9	30.4	29.9	30.1	30.4	30.4	29.1	24.7
Export of Goods & NFS	23.6	21.8	23.3	17.8	21.0	18.2	19.0	19.1	19.2	19.4	19.6	18.1
Total Consumption	113.9	77.5	71.6	80.5	75.1	82.5	80.3	80.7	80.4	80.3	81.3	76.7
Total Investment	28.6	13.0	13.3	12.6	12.2	11.8	12.4	12.8	13.6	14.6	15.9	19.6
Gross Domestic Savings	-13.9	2.1	6.8	-1.0	0.4	-1.0	1.1	0.9	1.4	2.2	4.3	12.2
Gross National Savings	-10.7	5.2	11.9	4.3	5.3	4.3	5.1	5.0	5.9	7.0	8.1	14.7
Memorandum Item:												
-----												
GDP Implicit Deflator	100.0	176.3	185.3	187.5	194.8	203.2	211.2	218.4	225.6	232.5	254.6	293.9
Implicit Consumer Price Index	100.0	218.8	244.4	231.7	256.8	245.0	254.7	263.7	272.4	280.5	306.8	355.4
Average Import Price Index	100.0	102.1	107.3	108.6	112.8	117.7	121.2	126.1	131.1	135.0	147.6	179.5
Average Export Price Index	100.0	60.8	62.7	56.5	58.9	63.5	67.7	71.0	74.5	78.5	93.8	120.4
External Terms of Trade Index	100.0	59.5	58.4	52.0	52.2	53.9	55.9	56.3	56.8	58.1	63.6	67.1
Incremental Capital-Output Ratio						6.8	4.9	5.2	4.3	3.7	3.8	3.3

Last Update by K. SOMAN on 9/20/89

TABLE 2.5 BENIN: SUPPLY AND USES OF RESOURCES AT CURRENT PRICES

	ACTUAL					ESTIMATES		SHORT-TERM			LONG-TERM	
	1980	1984	1985	1986	1987	1988	1989	1990	1991	1992	1995	2000
Supply of Resources	406.8	611.5	658.2	654.4	668.2	696.3	738.8	783.4	835.3	891.9	1073.1	1543.1
Gross Domestic Product	244.9	466.4	502.0	502.5	502.9	534.0	568.8	602.3	640.7	684.2	831.0	1237.2
Imports of Goods & NFS	161.9	145.1	156.2	151.8	165.4	162.2	170.0	181.1	194.6	207.7	242.1	306.0
Goods	124.1	100.6	109.8	115.1	122.5	123.0	130.3	140.9	153.7	166.1	198.4	257.7
Non Factor Services	37.9	44.5	46.4	36.7	42.8	39.3	39.7	40.2	40.9	41.6	43.7	48.2
Use of Resources	406.8	610.7	657.8	652.5	664.9	691.2	729.9	778.3	832.2	895.3	1107.6	1613.0
Gross Domestic Expenditures	349.1	509.1	540.9	563.1	559.2	594.2	621.7	663.5	708.9	762.9	945.0	1388.6
Consumption	279.0	448.5	474.2	500.1	497.7	530.9	550.9	586.5	621.6	662.7	812.9	1146.6
Public	27.1	57.0	66.7	70.3	73.5	63.9	63.1	62.7	62.8	63.4	68.6	86.1
Private	251.9	391.5	407.6	429.8	424.1	467.0	487.8	523.8	558.7	599.3	744.3	1060.5
Investment	70.1	60.6	66.6	63.1	61.6	63.2	70.8	77.0	87.4	100.2	132.1	242.0
Fixed Capital Formation	69.1	60.5	65.8	60.2	63.5	61.3	70.1	76.3	86.5	99.0	130.8	240.0
Public Sector, incl PEs	62.9	48.4	52.5	41.1	41.5	41.0	47.0	51.5	58.2	66.5	87.4	148.8
Private Sector	6.2	12.1	13.1	19.1	22.0	20.3	23.1	24.8	28.3	32.5	43.4	91.2
Changes in Stocks	1.0	0.1	1.1	2.9	-1.9	1.9	0.7	0.7	0.9	1.2	1.3	2.0
Exports of Goods & NFS	57.7	101.6	116.9	89.4	105.7	97.0	108.2	114.8	123.3	182.4	182.6	224.4
Goods	40.8	80.9	89.2	64.5	78.2	67.0	76.9	82.5	89.4	96.8	121.3	171.8
Non-Factor Services	16.9	20.8	27.8	24.9	27.5	30.0	31.3	32.3	33.9	35.6	41.2	52.6
Domestic Savings	-34.1	18.0	27.8	2.5	5.2	3.1	17.9	15.8	19.1	21.5	18.1	90.6
Resource Gap	104.2	43.4	39.3	62.5	59.7	65.2	61.8	66.3	71.4	75.3	79.5	81.5
Net Factor Income, incl work. remit.	6.1	3.7	10.6	12.5	12.6	12.6	13.8	16.4	18.6	21.7	21.7	22.9
Gross National Savings	-28.0	21.7	38.4	14.9	17.8	15.7	31.7	32.2	37.7	43.2	39.8	113.5
Current Acc. Deficit, excl. transf.	-98.1	-39.7	-28.7	-50.0	-47.1	-52.7	-48.0	-49.9	-52.8	-53.6	-57.8	-58.6

TABLE 3.1 BENIN: BALANCE OF PAYMENTS

(In Current US dollar, million)

	ACTUAL				ESTIMATES		SHORT-TERM			LONG-TERM	
	1984	1985	1986	1987	1988	1989	1990	1991	1992	1995	2000
Trade Balance fob/fob	-45.1	-45.9	-146.1	-147.6	-188.1	-169.6	-185.2	-204.3	-219.8	-244.8	-272.8
Exports of goods, fob	185.1	198.5	186.3	260.1	224.8	244.0	262.1	283.7	307.4	385.2	545.3
Imports of goods, fob	230.2	244.4	332.4	407.7	412.9	413.6	447.2	488.0	527.3	629.8	818.1
Non-Factor services, net	-54.3	-41.6	-34.3	-51.1	-31.0	-26.7	-25.2	-22.3	-19.1	-7.8	14.0
Exports of non-factor services	47.5	61.8	71.8	91.5	100.9	99.4	102.5	107.6	112.9	130.9	167.1
Imports of non-factor services	101.8	103.3	106.1	142.6	131.8	126.1	127.8	129.9	132.0	138.7	153.2
Resource Balance	-99.4	-87.4	-180.4	-196.6	-219.0	-196.3	-210.4	-226.6	-236.9	-252.4	-258.8
Total Factor Service Receipts	38.1	51.4	87.5	77.0	79.2	81.0	89.4	98.1	103.8	107.9	115.5
Interest Receipts on Reserves	-0.1	-1.2	-1.2	-7.5	-7.6	-2.8	1.8	8.0	8.6	12.6	20.3
Workers Remittances Receipts	38.2	52.5	68.7	84.5	86.8	83.8	87.6	92.1	95.2	95.2	95.2
Total Factor Services Payments	29.6	27.8	31.5	35.1	36.9	37.3	37.4	39.1	35.1	38.9	42.7
Net Direct Investment Income	1.9	2.0	2.6	3.2	3.4	3.3	3.4	3.6	3.7	4.0	4.6
Total Interest on MLT Debt	27.7	25.8	28.9	31.9	33.6	34.0	34.0	35.6	31.4	34.9	38.1
Net Factor Service Income	8.5	23.6	36.0	41.9	42.2	43.7	52.0	59.0	68.7	69.0	72.8
Goods & Services Balance	-90.9	-63.9	-144.4	-156.7	-176.8	-152.5	-158.4	-167.6	-170.2	-183.4	-186.1
Net Current Transfers	9.2	7.1	10.0	10.5	19.2	3.2	3.2	3.5	3.8	5.7	6.3
Current Acc. Balance, incl transf.	-81.8	-56.7	-134.3	-146.2	-157.5	-149.4	-155.2	-164.1	-166.4	-177.7	-179.7
Capital Account Balance	66.9	11.3	89.5	12.8	42.9	28.3	95.4	119.2	123.8	196.8	227.4
Official Capital Grants Disb.	28.8	22.0	24.6	48.0	52.1	51.7	54.3	57.0	59.8	69.3	111.6
Net Direct Foreign Investment	0.7	0.7	1.2	1.3	1.3	1.3	1.6	1.6	1.6	1.9	1.9
Net Capital MLT	-1.1	-12.9	-22.8	-8.3	3.6	10.3	31.3	60.6	82.4	125.8	114.0
Disbursements	52.2	46.1	54.0	58.9	64.0	67.4	83.0	97.2	96.9	160.0	160.0
Repayment	53.3	59.0	76.8	67.2	60.4	57.1	51.7	36.6	34.5	34.4	46.0
Other Capital, incl errors & Om.	36.5	1.5	86.6	-28.3	-14.1	-34.9	8.3	0.0	0.0	0.0	0.0
Overall Balance	-14.9	-45.4	-44.8	-133.4	-114.7	-121.0	-59.8	-44.9	-42.5	19.1	47.7
Overall Financing	14.9	45.4	44.8	133.4	114.7	121.0	59.8	44.9	42.5	-19.1	-47.7
Net Reserves Changes, - = incr.	-8.2	13.8	-4.0	78.2	1.0	-55.6	-57.1	-53.0	-31.7	-19.0	-19.0
Net use of IMF Resources	0.0	0.0	0.0	0.0	0.0	7.9	11.7	5.3	-0.1	-8.4	0.0
Net Resources of IDA Program Aid	0.0	0.0	0.0	0.0	0.0	45.0	-0.3	-0.3	-0.3	-0.3	-5.0
Net Resources - SPA Initiative	0.0	0.0	0.0	0.0	0.0	113.0	-4.0	-4.0	-4.0	-14.3	-12.3
Net Other Bilateral Program Aid	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Changes in Ext. Arrears, + = incr	23.1	31.6	48.8	57.3	46.7	-293.0	0.0	0.0	0.0	0.0	0.0
Net Rescheduling Savings	0.0	0.0	0.0	0.0	67.1	301.0	37.4	4.9	-22.5	-21.2	-14.9
Debt Cancellation Resources	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Residual Unfinanced Gap 1/	0.0	0.0	0.0	-0.1	-0.1	2.6	72.1	92.0	101.2	44.2	3.6

1/ Identically nil historically.

TABLE 3.2 BENIN: VOLUME, VALUE AND UNIT PRICE OF MAIN EXPORT COMMODITIES

(Volume in '000 tons; Unit Price in CFA/Kg; Value in CFA francs billion)

	ACTUAL					ESTIMATES		SHORT-TERM			LONG-TERM	
	1980	1984	1985	1986	1987	1988	1989	1990	1991	1992	1995	2000
<b>Oil</b>												
Volume	1.72	0.99	5.22	2.30	12.53	10.99	11.32	11.65	12.00	12.36	13.51	15.66
Unit Price	129.81	308.27	267.99	131.05	84.66	92.02	84.20	93.29	100.20	107.61	133.31	154.55
Value	0.22	0.30	1.40	0.30	1.06	1.01	0.95	1.09	1.20	1.33	1.80	2.42
<b>Palm Kernel Oil</b>												
Volume	7.50	7.38	2.56	7.51	2.17	4.12	4.24	4.37	4.50	4.64	5.07	5.87
Unit Price	117.47	469.22	273.56	95.20	81.49	119.71	109.53	115.01	120.76	126.80	146.78	170.16
Value	0.88	3.46	0.70	0.71	0.18	0.49	0.46	0.50	0.54	0.59	0.74	1.00
<b>Palm Kernel Cake</b>												
Volume	14.20	4.71	13.85	12.00	5.57	2.30	2.37	2.44	2.51	2.59	2.83	2.83
Unit Price	34.82	52.66	44.81	22.99	15.72	13.71	12.55	13.17	13.83	14.52	16.81	19.49
Value	0.49	0.25	0.62	0.28	0.09	0.03	0.03	0.03	0.03	0.04	0.05	0.06
<b>Ginned Cotton</b>												
Volume	3.6	16.8	33.4	34.2	46.6	21.2	29.7	31.2	32.7	34.4	37.5	41.5
Unit Price	258.29	632.50	617.95	320.72	321.04	382.36	404.15	428.40	454.10	484.53	588.59	719.56
Value	0.94	10.64	20.63	10.97	14.96	8.11	12.00	13.35	14.86	16.65	22.10	29.83
<b>Cotton Seed</b>												
Volume	1.56	14.18	30.01	19.29	66.59	31.82	41.37	42.20	43.04	43.90	46.59	51.44
Unit Price	24.43	39.81	49.96	21.13	21.11	29.43	31.11	32.66	34.30	36.01	41.69	50.72
Value	0.04	0.56	1.50	0.41	1.41	0.94	1.29	1.38	1.48	1.58	1.94	2.61
<b>Cotton Cake</b>												
Volume	3.3	5.2	5.3	4.1	3.2	2.0	2.0	2.1	2.1	2.2	2.3	2.5
Unit Price	35.30	50.92	52.33	46.00	37.72	22.71	24.00	25.20	26.46	27.78	32.16	39.13
Value	0.12	0.27	0.28	0.19	0.12	0.05	0.05	0.05	0.06	0.06	0.07	0.10
<b>Coffee</b>												
Volume	1.36	0.63	0.32	0.40	0.62	0.62	0.63	0.64	0.64	0.65	0.67	0.70
Unit Price	614.75	1016.10	928.72	744.83	570.54	632.16	598.66	556.75	584.59	613.82	710.57	950.90
Value	0.84	0.64	0.30	0.30	0.35	0.39	0.38	0.35	0.38	0.40	0.48	0.67
<b>Cocoa</b>												
Volume	5.30	2.30	2.02	1.41	0.15	0.05	0.05	0.05	0.05	0.06	0.06	0.06
Unit Price	770.00	745.01	692.86	637.43	612.57	489.45	391.07	360.17	374.58	389.56	438.21	559.27
Value	4.08	1.71	1.40	0.90	0.09	0.03	0.02	0.02	0.02	0.02	0.02	0.03
<b>Crude Oil</b>												
Volume (barrels, mil)	0.25	2.79	2.69	1.77	1.88	1.66	1.71	1.76	1.79	1.83	1.88	1.98
Unit Price	10.37	11.64	11.16	3.98	5.10	4.04	4.90	5.04	5.30	5.56	6.62	8.86
Value	2.56	32.46	30.07	7.06	9.60	6.68	8.35	8.86	9.49	10.16	12.47	17.54
<b>Cement</b>												
Volume	0.13	0.33	0.54	0.51	0.51	0.56	0.67	0.67	0.74	0.75	0.85	1.05
Unit Price	175.00	166.03	167.77	196.93	216.00	233.17	239.91	267.38	271.20	278.47	330.61	410.03
Value	0.02	0.06	0.09	0.10	0.11	0.13	0.16	0.18	0.20	0.21	0.28	0.43
<b>Other Agricultural Exports</b>												
Volume	14.17	7.98	19.73	43.91	34.06	33.03	33.77	38.22	40.56	42.25	47.70	61.00
Avg Unit Price	197.56	190.51	192.81	193.57	193.77	233.10	231.00	217.14	229.30	242.14	285.14	357.04
Value	2.80	1.52	3.80	8.50	6.60	7.70	7.80	8.30	9.30	10.23	13.60	21.78
<b>Manufacture Re-exports</b>												
Volume	75.2	82.7	80.1	83.6	95.5	84.0	89.4	84.3	87.1	89.1	88.6	93.7
Avg Unit Price	369.70	350.75	354.44	416.04	456.31	492.59	506.82	564.85	572.93	588.28	698.43	866.21
Value	27.80	29.00	28.40	34.80	43.60	41.40	45.30	47.60	49.90	52.40	61.90	81.20
<b>Total Commodity Exports</b>												
Volume	162.3	529.1	565.8	454.5	527.8	419.7	451.4	460.7	473.8	485.5	506.1	550.0
Avg Unit Price	251.37	152.85	157.63	141.94	148.11	159.53	170.12	177.38	184.59	192.91	228.11	286.64
Value	40.8	80.9	89.2	64.5	78.2	67.0	76.8	81.7	87.5	93.7	115.5	157.7

Source: Official Government data;  
Staff estimates & projections.

TABLE S.3 BENIN: VALUE OF MAIN IMPORT COMMODITIES

(In CFA francs, million; Unless otherwise indicated)

	ACTUAL					ESTIMATES		SHORT-TERM			LONG-TERM	
	1980	1984	1985	1986	1987	1988	1989	1990	1991	1992	1995	2000
<b>A. Current Values</b>												
Total Good Imports	124052	100581	109796	115105	122517	122971	130290	140877	153724	166086	198377	257715
Foodstuffs	24014	23205	25498	42008	31855	32009	34135	36751	39562	42172	44705	21583
Education and Health Items	24082	16007	17243	8080	15432	15179	16104	17502	19039	20591	25798	38188
Other Consumer Goods	4826	4681	5042	2021	5617	6985	7195	7493	7782	8015	8759	11200
Oil and Petroleum Products	9902	17294	22306	8006	6132	6156	6528	6952	7446	7948	9631	11335
Intermediate Goods	23370	22700	29102	41989	34307	34354	36904	39650	42779	44888	52535	74707
Capital Goods	37878	16694	10604	13001	28174	28287	29424	32529	37117	42472	56948	100702
<b>B. Constant 1980 Prices</b>												
Total Good Imports	124052	98477	102283	105947	108589	104488	107482	111746	117247	122986	134432	143543
Foodstuffs	24014	22720	23753	38666	28234	27198	28160	29151	30174	31228	30295	12021
Education and Health Items	24082	15672	16084	7437	13677	12898	13285	13863	14521	15247	17483	21270
Other Consumer Goods	4826	4583	4697	1860	5865	5935	5935	5935	5935	5935	5935	8238
Oil and Petroleum Products	9902	16932	20779	7369	5435	5231	5385	5515	5679	5886	6527	8313
Intermediate Goods	23370	22226	27111	38648	30407	29190	30444	31459	32828	33239	35601	41610
Capital Goods	37878	16345	9878	11967	24971	24035	24273	25803	28309	31450	38591	56090
<b>C. Percentage Distribution</b>												
Total Good Imports	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Foodstuffs	19.4	23.1	23.2	36.5	26.0	26.0	26.2	26.1	25.7	25.4	22.5	8.4
Education and Health Items	19.4	15.9	15.7	7.0	12.6	12.3	12.4	12.4	12.4	12.4	13.0	14.8
Other Consumer Goods	3.9	4.7	4.6	1.8	5.4	5.7	5.5	5.3	5.1	4.8	4.4	4.3
Oil and Petroleum Products	8.0	17.2	20.3	7.0	5.0	5.0	5.0	4.9	4.8	4.8	4.9	4.4
Intermediate Goods	18.8	22.6	26.5	36.5	28.0	27.9	28.3	28.2	27.8	27.0	26.5	29.0
Capital Goods	30.5	16.6	9.7	11.3	23.0	23.0	22.6	23.1	24.1	25.6	28.7	39.1
<b>D. Real Annual Growth Rate</b>												
Total Good Imports		-4.8%	3.9%	3.6%	2.5%	-3.8%	2.9%	4.0%	4.9%	4.9%	3.0%	0.5%
Foodstuffs		-5.8%	4.8%	62.8%	-27.0%	-3.7%	3.5%	3.5%	3.5%	3.5%	-3.6%	-34.5%
Education and Health Items	4.7%	-4.8%	2.5%	-53.7%	83.9%	-5.7%	3.0%	4.5%	4.6%	5.0%	4.0%	4.0%
Other Consumer Goods	5.5%	-4.8%	2.5%	-60.4%	215.3%	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%
Oil and Petroleum Products		114.2%	22.7%	-64.5%	-26.2%	-3.8%	2.9%	2.4%	3.0%	3.5%	3.9%	5.8%
Intermediate Goods		16.2%	22.0%	42.6%	-21.3%	-4.0%	4.3%	3.3%	3.7%	1.9%	2.4%	3.5%
Capital Goods		-47.2%	-39.6%	21.1%	108.7%	-3.7%	1.0%	6.3%	9.7%	11.1%	9.2%	8.4%
<b>Memorandum Item:</b>												
Average Import Price Index	100.0	102.1	107.3	108.6	112.8	117.7	121.2	126.1	131.1	135.0	147.6	179.5
Average Export Price Index	100.0	60.8	62.7	56.5	58.9	63.5	67.7	71.0	74.5	78.5	93.8	120.4
External Terms of Trade Index	100.0	59.5	58.4	52.0	52.2	53.9	55.9	56.3	56.8	58.1	63.6	67.1

TABLE 3.4 BENIN: EXPORTS AND IMPORT OF NON-FACTOR SERVICES

(In CFA francs, billion; Unless otherwise indicated)

	ACTUAL					ESTIMATES		SHORT-TERM			LONG-TERM	
	1980	1984	1985	1986	1987	1988	1989	1990	1991	1992	1995	2000
<b>A. Exports</b>												
Exports of Non-Factor Services	16.9	20.8	27.8	24.9	27.5	30.0	31.3	32.3	33.9	35.6	41.2	52.6
Freight and Insurance	4.0	4.8	5.5	3.3	3.1	3.4	3.9	4.1	4.3	4.5	5.3	7.6
Travel	2.7	3.9	4.2	4.7	5.2	6.5	6.7	6.9	7.2	7.4	8.1	9.3
Other Transport	6.5	7.3	12.0	10.8	13.0	13.8	14.3	14.7	15.6	16.5	19.7	25.4
Government Official Operations	2.6	3.3	5.0	5.0	5.1	5.2	5.3	5.4	5.7	6.0	6.9	8.8
Other Services	1.1	1.4	1.0	1.0	1.0	1.1	1.1	1.1	1.1	1.2	1.3	1.5
<b>B. Imports</b>												
Imports of Non-Factor Services	37.9	44.5	48.4	36.7	42.8	39.3	39.7	40.2	40.9	41.6	43.7	48.2
Freight and Insurance	14.5	17.4	19.2	20.0	25.5	22.4	22.8	23.3	23.8	24.2	25.7	28.4
Travel	1.0	1.5	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.4	3.6	4.1
Other Transport	4.7	5.8	7.0	5.5	6.1	5.9	5.9	5.9	5.9	6.0	6.2	7.1
Government Official Operations	4.0	4.5	4.0	4.0	4.0	3.8	3.8	3.8	3.8	3.9	4.0	4.2
Other Services	13.7	15.1	12.9	4.0	4.0	4.0	4.0	4.0	4.1	4.1	4.3	4.5
Non-Factor Services, Net	-20.9	-23.7	-18.7	-11.9	-15.4	-9.2	-8.4	-6.0	-7.0	-6.0	-2.5	4.4
Memorandum Item:												
(Percentage shares of good exports)												
Exports of Non-Factor Services	41.5%	25.7%	31.1%	36.5%	35.2%	44.9%	40.7%	39.1%	37.9%	36.7%	34.0%	30.6%
Imports of Non-Factor Services	92.8%	55.0%	52.1%	57.0%	54.8%	58.6%	51.7%	48.8%	45.8%	43.0%	36.0%	28.1%
(Percentage shares of good imports)												
Exports of Non-Factor Services	13.6%	20.6%	25.3%	21.6%	22.4%	24.4%	24.0%	22.9%	22.0%	21.4%	20.8%	20.4%
Imports of Non-Factor Services	30.5%	44.2%	42.3%	31.9%	35.0%	31.9%	30.5%	28.6%	26.6%	25.0%	22.0%	18.7%

TABLE 3.6 BENIN: EXTERNAL TRADE INDICES

(BASE YEAR 1980 = 100)

	ACTUAL					ESTIMATES		SHORT-TERM			LONG-TERM	
	1980	1984	1985	1986	1987	1988	1989	1990	1991	1992	1995	2000
<b>A. Export Volume Indices</b>												
Total Goods Exports	100.0	326.0	348.8	280.1	325.2	258.6	278.3	284.9	294.1	302.5	317.1	349.6
Oil Palm Products	100.0	55.8	92.4	98.1	86.5	74.3	76.5	78.8	81.2	83.6	91.4	104.0
Palm Oil	100.0	57.4	303.2	133.4	727.4	638.0	657.1	676.8	697.1	718.0	784.6	909.6
Palm Kernel Oil	100.0	98.4	34.1	100.1	28.9	54.9	56.6	58.3	60.0	61.8	67.5	78.3
Palm Kernel Cake	100.0	33.2	97.5	84.5	39.2	16.2	16.7	17.2	17.7	18.2	19.9	19.9
Cotton Products	100.0	425.5	807.0	676.4	1367.1	646.2	860.9	906.2	955.2	1008.3	1115.1	1324.3
Ginned Cotton	100.0	463.6	920.2	942.4	1284.4	584.4	824.0	906.4	997.1	1096.8	1269.7	1620.4
Cotton Seeds	100.0	910.5	1927.6	1238.8	4276.8	2043.9	2657.1	2710.2	2764.4	2819.7	2992.3	3303.7
Cotton Cake	100.0	157.3	159.8	123.7	96.7	60.1	61.3	62.5	63.7	65.0	69.0	76.2
Cocoa	100.0	43.4	38.0	26.6	2.9	1.0	1.0	1.0	1.0	1.0	1.1	1.1
Coffee	100.0	48.0	23.4	29.2	45.5	45.9	48.4	48.9	47.3	47.8	49.3	51.8
Crude Oil	100.0	1128.2	1089.8	717.1	760.9	689.8	689.6	710.3	724.5	739.0	761.4	800.3
Cement	100.0	263.5	426.7	403.9	405.1	443.5	530.5	535.5	586.6	599.9	673.7	834.2
Other Exports	100.0	56.3	139.2	309.8	240.3	233.1	238.2	269.7	286.2	298.1	336.5	430.4
Manufacture Re-exports	100.0	110.0	104.6	111.2	127.1	111.8	118.9	112.1	115.8	118.5	117.9	124.7
<b>B. Export Price Indices</b>												
Total Goods Exports	100.0	60.8	62.7	56.5	58.9	63.5	67.7	71.0	74.5	78.5	93.8	120.4
Oil Palm Products	100.0	293.6	207.9	88.4	64.5	79.9	73.1	78.5	83.2	88.2	105.3	134.3
Palm Oil	100.0	235.9	206.5	101.0	65.2	70.9	64.9	71.9	77.2	82.9	102.7	131.1
Palm Kernel Oil	100.0	399.4	232.9	81.0	69.4	101.9	93.2	97.9	102.8	107.9	125.0	159.5
Palm Kernel Cake	100.0	151.2	128.7	66.0	45.2	39.4	36.0	37.8	39.7	41.7	48.3	61.6
Cotton Products	100.0	227.4	226.5	122.0	119.5	136.6	144.4	153.8	163.8	174.4	210.8	257.5
Ginned Cotton	100.0	244.9	239.3	124.2	124.3	148.0	156.5	167.0	178.1	190.1	230.9	282.3
Cotton Seeds	100.0	163.0	204.6	86.5	86.4	120.5	127.4	133.7	140.4	147.4	170.7	207.7
Cotton Cake	100.0	144.2	148.2	130.3	106.9	64.3	68.0	71.4	75.0	78.7	91.1	110.9
Cocoa	100.0	96.8	90.0	82.8	79.6	63.6	50.8	46.8	48.6	50.6	56.9	72.6
Coffee	100.0	165.3	151.1	121.2	92.8	102.8	97.4	90.6	96.4	102.5	123.5	166.8
Crude Oil	100.0	112.2	107.6	98.4	49.2	38.9	47.2	48.6	51.7	55.0	66.3	88.7
Cement	100.0	94.9	95.9	112.5	123.4	133.2	137.1	152.8	155.0	159.1	188.9	234.3
Other Exports	100.0	96.4	97.5	98.0	98.1	118.0	116.9	109.9	116.1	122.6	144.3	180.7
Manufacture Re-exports	100.0	94.9	95.9	112.5	123.4	133.2	137.1	152.8	155.0	159.1	188.9	234.3
<b>Memorandum Items:</b>												
Average Import Price Index	100.0	102.1	107.3	108.6	112.8	117.7	121.2	126.1	131.1	135.0	147.6	179.5
Average Export Price Index	100.0	60.8	62.7	56.5	58.9	63.5	67.7	71.0	74.5	78.5	93.8	120.4
External Terms of Trade	100.0	59.5	58.4	52.0	52.2	53.9	55.9	56.3	56.8	58.1	63.6	67.1

TABLE 10.1 MAIN ECONOMIC INDICATORS

	-ACTUAL-				--ESTIMATES--		---SHORT-TERM---			---LONG-TERM---	
	1984	1985	1986	1987	1988	1989	1990	1991	1992	1995	2000
GDP Growth Rate	0.4%	2.4%	-1.1%	-3.6%	1.8%	2.4%	2.4%	3.0%	3.6%	3.9%	5.8%
GDY Growth Rate	-13.0%	0.5%	0.6%	-8.6%	10.0%	2.3%	2.7%	3.2%	4.5%	5.3%	6.6%
GDY/Capita Growth Rate	-15.8%	-2.7%	-2.6%	-11.5%	6.5%	-1.0%	-0.6%	-0.1%	1.2%	1.9%	3.5%
Total Cons/Capita Growth Rate	-27.9%	-8.4%	7.7%	-13.1%	8.3%	-3.4%	-0.4%	-0.7%	0.2%	0.5%	1.0%
Private Cons/Capita Growth Rate	-27.1%	-9.8%	7.7%	-13.6%	11.7%	-2.8%	0.4%	0.0%	0.8%	0.8%	1.1%
Implicit GDP Deflator Growth Rate	5.8%	5.1%	1.2%	3.9%	4.3%	4.0%	3.4%	3.3%	3.0%	3.1%	3.0%
Nominal Effective Exchange Rate											
Total Debt Service MLT (in US\$)	81.0	84.8	105.7	99.2	94.0	91.1	85.7	72.2	65.9	69.3	84.1
External Debt Service/XGNFS 1/ Debt Service/GDP	48.7	49.0	67.1	48.0	50.4	45.6	40.1	31.0	26.0	21.7	18.5
	7.6	7.6	7.3	5.9	5.2	5.0	4.5	3.5	3.0	2.8	2.1
Gross Investment/GDP	13.0	13.3	12.6	12.2	11.8	12.4	12.8	13.6	14.6	15.9	19.6
Domestic Savings/GDP	2.1	6.6	-1.0	0.4	-1.0	1.1	0.9	1.4	2.2	4.3	12.2
National Savings/GDP											
Marginal Savings Rate	-1.2	2.3	-15.4	-0.1	-0.1	0.4	0.0	0.3	0.3	0.3	0.5
Public Investment/GDP	10.4	10.4	8.2	8.3	7.7	8.3	8.5	9.1	9.7	10.5	12.0
Public Savings/GDP											
Private Investment/GDP	2.6	2.6	3.8	4.4	3.8	4.1	4.1	4.4	4.7	5.2	7.4
Private Savings/GDP											
Government Revenue/GDP 2/ Government Total Expendit./GDP Government Deficit or Surplus /GDP											
Exports of GNFS Growth Rate	55.5%	11.6%	-15.1%	13.3%	-14.8%	4.5%	1.2%	2.3%	2.0%	1.1%	1.5%
Exports of GNFS/GDP	21.8	23.3	17.8	21.0	18.2	19.0	19.1	19.2	19.4	19.6	18.1
Imports of GNFS Growth Rate	-3.3%	2.5%	-4.0%	4.9%	-5.9%	1.7%	2.4%	3.3%	3.6%	2.2%	0.1%
Imports of GNFS/GDP	31.1	31.1	30.2	32.9	30.4	29.9	30.1	30.4	30.4	29.1	24.7
Current Acc., excl grt. (in US\$)	-90.9	-63.9	-144.4	-156.7	-176.8	-152.5	-158.4	-167.6	-170.2	-183.4	-186.1
Current Account/GDP 2/ Current Account/GDP 2/	-8.5	-5.7	-9.9	-9.4	-9.9	-8.4	-8.3	-8.2	-7.8	-7.0	-4.7

1/ Debt Service as scheduled;  
exports of goods and NFS net of  
manufacturing re-exports.

2/ Excluding official grants.

BENIN - ECONOMIC & SOCIAL DATABASE

ECOBENIN: Sources of Statistical Information

Please note that the main sources of information for the purpose of this database are listed on page 9 of the main document. As of now, most of the data are really collected from the various issues of the IMF's Recent Economic Developments (RED) that are available in my office. With better coordination of field work being done by i) the Bank's national accounts Technical Assistant; ii) the IMF's field Staff; and iii) the Government (MPS/INSAE), I hope that more reliable and consistent data will be made available soon.

Notes for C ZSHARE OF INVEST FOR PUBLIC:

RED numbers : ratio of public investment over total investment

Notes for C COEF INDTAX RATEZ:

Fund's RED figures: historical ratios of indirect taxes over GDP at factor cost.

Notes for C EXS EXPORTS OF GOODS & NFS:

Total real exports of goods and non-factor services: endogenous variables; but components are obtained from the RED.

Notes for C GDP REAL GDPMP:

Gross domestic product in constant cfa francs, billions. historical data is obtained from RED. However, this is an endogenous variable computed as the sum of real GDP at factor cost plus net business indirect taxes.

Notes for C IMP CAPITAL GOODS:

Real import of capital import for productive investment. Obtained by deflating the current capital import by a the Manufacture Unit Value (MUV) index for the G-V industrial countries.

Notes for C IMP EDUC\_HEALTH ITEMS:

Nominal import of education and health related items deflated by MUV (Manufacture Unit Value) index.

Notes for C IMP PETROLEUM PRODUCTS:

Real import of oil and petroleum products computed by deflating nominal imports by the petroleum price index as reported in the IEC's (Bank) primary commodity Division (both historical and projected price data).

Notes for COEF INV PARAM A1:

Manually fine-tuned to reproduce historical investment levels. Attempt to econometric estimations is being pursued.

Notes for COEF INV PARAM A2:

Fine-tuned to reproduce historical investment data. Econometric estimations is being pursued.

Notes for N EXS AVGE DOLLAR CFAF EXRATE:

The historical values for the average and end-of-period US dollar over CFA franc exchange rate was obtained from the Fund's International Financial Statistics (line rf and ae).

Notes for N IMP CAPITAL GOODS:

BOP data as reported by Fund's RED. Source: BCEAO statistics

Notes for N IMP EDUC\_HEALTH ITEMS:

BCEAO's balance of payments statistics as reported by the IMF.

Notes for N IMP PETROLEUM PRODUCTS:

Import of petroleum products from various IMF documents, including the REDs, listing the SONACOP as the main providers of petroleum statistics in Benin.

KSoman/ECOBENIN/10/27/89.

## Formulas for all variables:

%SHARE OF INVEST FOR PUBLIC = < Yearly data: 1980 - 2000 >  
 CDEF INDTAX RATE% = < Yearly data: 1980 - 2000 >  
 C CONS FOOD CONSUMPTION =+70034 @ [1980];PREVIOUS(C CONS FOOD CONSUMPTION )\*(1+C CONS FOOD CONSUMPTION GR%)  
 C CONS FOOD CONSUMPTION GR% = < Yearly data: 1980 - 2000 >  
 C EXS EXPORTS OF GOODS & NFS=+C EXS GOODS EXPORTS CONST CFA+C NFS NON FACTOR SERVICES CREDIT  
 C EXS EXPORTS OF GOODS & NFS GR%=+PCT(C EXS EXPORTS OF GOODS & NFS)  
 C EXS GOODS EXPORTS CONST CFA=R EXS VOL EXPORTS THOU TONS+VALUE(N EXS PRI EXPORTS AVGE CFA\_KG,[1980])/1000  
 C EXS GOODS EXPORTS GRATEX=PCT(C EXS GOODS EXPORTS CONST CFA)  
 C GDP AGRICULTURE=+C QDP FOOD CROPS+C QDP FRUITS AND VEGETABLES+C QDP CASH CROPS  
 C GDP AGRICULTURE GRATEX=+PCT(C GDP AGRICULTURE)  
 C GDP AT FACTOR COST GRATEX=+PCT(C GDP VALUE ADDED AT FACTOR COST)  
 C GDP CASH CROPS =4.71 @ [1980]; PREVIOUS(C GDP CASH CROPS )\*(1+C GDP CASH CROPS GRATEX)  
 C GDP CASH CROPS GRATEX = < Yearly data: 1980 - 2000 >  
 C GDP CHANGE IN REAL GDP=12.566 @ [1980];+CHANGE(C GDP REAL GDPMP)  
 C GDP COMMERCE =59.33 @ [1980]; PREVIOUS(C GDP COMMERCE )\*(1+C GDP COMMERCE GRATEX)  
 C GDP COMMERCE GRATEX = < Yearly data: 1980 - 2000 >  
 C GDP CONSTRUCTION =10.02 @ [1980]; PREVIOUS(C GDP CONSTRUCTION )\*(1+C GDP CONSTRUCTION GRATEX)  
 C GDP CONSTRUCTION GRATEX = < Yearly data: 1980 - 2000 >  
 C GDP DOM FOOD SUPPLY=+C QDP FOOD CROPS+1000  
 C GDP ELECTRICITY AND WATER =1.08 @ [1980]; PREVIOUS(C GDP ELECTRICITY AND WATER )\*(1+C GDP ELECTRICITY AND WATER GRATEX)  
 C GDP ELECTRICITY AND WATER GRATEX = < Yearly data: 1980 - 2000 >  
 C GDP FISHERIES =3.61 @ [1980]; PREVIOUS(C GDP FISHERIES )\*(1+C GDP FISHERIES GRATEX)  
 C GDP FISHERIES GRATEX = < Yearly data: 1980 - 2000 >  
 C GDP FOOD CROPS=46.02 @ [1980]; PREVIOUS(C GDP FOOD CROPS)\*(1+C GDP FOOD CROPS GRATEX)  
 C GDP FOOD CROPS GRATEX = < Yearly data: 1980 - 2000 >  
 C GDP FORESTRY =3.28 @ [1980]; PREVIOUS(C GDP FORESTRY )\*(1+C GDP FORESTRY GRATEX)  
 C GDP FORESTRY GRATEX = < Yearly data: 1980 - 2000 >  
 C GDP FRUITS AND VEGETABLES=9.25 @ [1980]; PREVIOUS(C GDP FRUITS AND VEGETABLES)\*(1+C GDP FRUITS AND VEGETABLES GRATEX)  
 C GDP FRUITS AND VEGETABLES GRATEX = < Yearly data: 1980 - 2000 >  
 C GDP LIVESTOCK =30.58 @ [1980]; PREVIOUS(C GDP LIVESTOCK )\*(1+C GDP LIVESTOCK GRATEX)  
 C GDP LIVESTOCK GRATEX = < Yearly data: 1980 - 2000 >  
 C GDP MANUFACTURING =11.31 @ [1980]; PREVIOUS(C GDP MANUFACTURING )\*(1+C GDP MANUFACTURING GRATEX)  
 C GDP MANUFACTURING GRATEX = < Yearly data: 1980 - 2000 >  
 C GDP MINING =0.82 @ [1980]; PREVIOUS(C GDP MINING )\*(1+C GDP MINING GRATEX)  
 C GDP MINING GRATEX = < Yearly data: 1980 - 2000 >  
 C GDP NET INDIRECT TAXES=+C CDEF INDTAX RATE%+C GDP VALUE ADDED AT FACTOR COST  
 C GDP OTHER PRIMARY=+C GDP LIVESTOCK+C GDP FORESTRY+C GDP FISHERIES  
 C GDP OTHER PRIMARY GRATEX=+PCT(C GDP OTHER PRIMARY)  
 C GDP OTHER SERVICES =9.1 @ [1980]; PREVIOUS(C GDP OTHER SERVICES )\*(1+C GDP OTHER SERVICES GRATEX)  
 C GDP OTHER SERVICES GRATEX = < Yearly data: 1980 - 2000 >  
 C GDP PRIMARY PRODUCTION=+C GDP AGRICULTURE+C GDP OTHER PRIMARY  
 C GDP PRIMARY SECTOR GRATEX=+PCT(C GDP PRIMARY PRODUCTION)  
 C GDP PUBLIC ADMINISTRATION =19.38 @ [1980]; PREVIOUS(C GDP PUBLIC ADMINISTRATION )\*(1+C GDP PUBLIC ADMINISTRATION GRATEX)  
 C GDP PUBLIC ADMINISTRATION GRATEX = < Yearly data: 1980 - 2000 >  
 C GDP REAL GDPMP=+C GDP VALUE ADDED AT FACTOR COST+C GDP NET INDIRECT TAXES  
 C GDP REAL GDPMP GRATEX=0.097 @ [1980];+PCT(C GDP REAL GDPMP)  
 C GDP SECONDARY PRODUCTION=+C GDP MINING+C GDP MANUFACTURING+C GDP CONSTRUCTION+C GDP ELECTRICITY AND WATER  
 C GDP SECONDARY SECTOR GRATEX=+PCT(C GDP SECONDARY PRODUCTION)  
 C GDP TERTIARY SECTOR=+C GDP COMMERCE+C GDP TRANSPORT+C GDP PUBLIC ADMINISTRATION+C GDP OTHER SERVICES  
 C GDP TERTIARY SECTOR GRATEX=+PCT(C GDP TERTIARY SECTOR)  
 C GDP TRANSPORT =14.16 @ [1980]; PREVIOUS(C GDP TRANSPORT )\*(1+C GDP TRANSPORT GRATEX)  
 C GDP TRANSPORT GRATEX = < Yearly data: 1980 - 2000 >  
 C GDP VALUE ADDED AT FACTOR COST=+C GDP PRIMARY PRODUCTION+C GDP SECONDARY PRODUCTION+C GDP TERTIARY SECTOR  
 C IMP CAPITAL GOODS=+37878 @ [1980]; PREVIOUS(C IMP CAPITAL GOODS)\*(1+C IMP CAPITAL GOODS FXINV\_ELAS+PCT(C INV FIXED CAPITAL FORMATION))  
 C IMP CAPITAL GOODS FXINV\_ELAS = < Yearly data: 1980 - 2000 >  
 C IMP CAPITAL GOODS GR%=+PCT(C IMP CAPITAL GOODS)  
 C IMP EDUC\_HEALTH ITEMS =+24062 @ [1980];PREVIOUS(C IMP EDUC\_HEALTH ITEMS )\*(1+C IMP EDUC\_HEALTH ITEMS GR%)  
 C IMP EDUC\_HEALTH ITEMS GR% = < Yearly data: 1980 - 2000 >

Last Update by K. SOHAN on 9/20/89

C IMP FOODSTUFFS IMPORTS=C CONS FOOD CONSUMPTION-C GDP DOM FOOD SUPPLY  
 C IMP FOODSTUFFS IMPORTS GR% = PCT(C IMP FOODSTUFFS IMPORTS)  
 C IMP IMPORTS OF GOODS & NFS = N IMP IMPORTS OF GOODS & NFS / (N IMP PRI IMPORT PRICE INDEX / 100)  
 C IMP IMPORTS OF GOODS & NFS GR% = PCT(C IMP IMPORTS OF GOODS & NFS)  
 C IMP INTERMEDIATE GOODS = 23370 @ [1980]; PREVIOUS(C IMP INTERMEDIATE GOODS) \* (1 + C IMP INTERMEDIATE GOODS IND\_ELAS \* PCT(C GDP SECONDARY PRODUCTION))  
 C IMP INTERMEDIATE GOODS GR% = PCT(C IMP INTERMEDIATE GOODS)  
 C IMP INTERMEDIATE GOODS IND\_ELAS = < Yearly data: 1980 - 2000 >  
 C IMP OTHER CONSUMER GOODS = 4826 @ [1980]; PREVIOUS(C IMP OTHER CONSUMER GOODS) \* (1 + C IMP OTHER CONSUMER GOODS GR%)  
 C IMP OTHER CONSUMER GOODS GR% = < Yearly data: 1980 - 2000 >  
 C IMP PETROLEUM PRODUCTS = C IMP PETROLEUM PRODUCTS QDP SHR% \* C GDP REAL QDPMP \* 1000  
 C IMP PETROLEUM PRODUCTS QDP SHR% = < Yearly data: 1980 - 2000 >  
 C IMP PETROLEUM PRODUCTS GR% = PCT(C IMP PETROLEUM PRODUCTS)  
 C IMP TOTAL GOODS IMPORTS = C IMP FOODSTUFFS IMPORTS + C IMP EDUC\_HEALTH ITEMS + C IMP OTHER CONSUMER GOODS + C IMP PETROLEUM PRODUCTS + C IMP INTERMEDIATE GOODS + C  
 C IMP TOTAL GOODS IMPORTS GR% = PCT(C IMP TOTAL GOODS IMPORTS)  
 C IMP TOTAL GOODS IMPORTS MIL = N IMP TOTAL GOODS IMPORTS FOB MIL / (N IMP PRI IMPORT PRICE INDEX / 100)  
 C INV CHANGES IN STOCKS = RATIO INV CHANGES IN STOCKS \* C GDP CHANGE IN REAL GDP \* 1000  
 C INV FIXED CAPITAL FORMATION = COEF INV PARAM A1 \* (C GDP REAL QDPMP \* 1000) + COEF INV PARAM A2 \* (C GDP CHANGE IN REAL GDP \* 1000) + COEF INV PARAM K  
 C INV FIXED CAPITAL FORMATION GR% = PCT(C INV FIXED CAPITAL FORMATION)  
 C INV FIXED PRIVATE INVEST GR% = PCT(C INV PRIVATE FIXED INVESTMENT)  
 C INV FIXED PUBLIC INVEST GR% = PCT(C INV PUBLIC AND PARA FIXED INVEST)  
 C INV GROSS INVESTMENT = C INV FIXED CAPITAL FORMATION + C INV CHANGES IN STOCKS  
 C INV PRIVATE FIXED INVESTMENT = C INV FIXED CAPITAL FORMATION - C INV PUBLIC AND PARA FIXED INVEST  
 C INV PUBLIC AND PARA FIXED INVEST = C INV FIXED CAPITAL FORMATION \* C %SHARE OF INVEST FOR PUBLIC  
 C NAT 5\_YEAR GDP CHANGES = C GDP REAL QDPMP - PREVIOUS(C GDP REAL QDPMP, 4)  
 C NAT EXPORTS ADJ TERMS OF TRADE = C EXS EXPORTS OF GOODS & NFS + C NAT TERMS OF TRADE ADJUSTEMENT  
 C NAT FIVE YEAR CUML INVEST = PREVIOUS(RSUM(C NAT INV GROSS INVESTMENT, 5))  
 C NAT FIVE YEAR ICOR = C NAT FIVE YEAR CUML INVEST / C NAT 5\_YEAR GDP CHANGES  
 C NAT GDY PER CAPITA GR% = PCT(C NAT GROSS DOMESTIC INCOME / S IND POPULATION IN THOU)  
 C NAT GROSS DOMESTIC INCOME = C GDP REAL QDPMP + C NAT TERMS OF TRADE ADJUSTEMENT  
 C NAT GROSS DOMESTIC INCOME GR% = PCT(C NAT GROSS DOMESTIC INCOME)  
 C NAT GROSS DOMESTIC SAVINGS = C GDP REAL QDPMP - C NAT TOTAL CONSUMPTION  
 C NAT GROSS DOMESTIC SAVINGS TTADJ = C NAT GROSS DOMESTIC INCOME - C NAT TOTAL CONSUMPTION  
 C NAT GROSS NATIONAL INCOME = C NAT GROSS NATIONAL PRODUCT + C NAT TERMS OF TRADE ADJUSTEMENT  
 C NAT GROSS NATIONAL PRODUCT = C GDP REAL QDPMP + C NAT NET FACTOR INCOME  
 C NAT GROSS NATIONAL PRODUCT GR% = PCT(C NAT GROSS NATIONAL PRODUCT)  
 C NAT GROSS NATIONAL SAVINGS = C NAT GROSS DOMESTIC SAVINGS TTADJ + C NAT NET FACTOR INCOME + C NAT TOTAL CURRENT TRANSFERS  
 C NAT INV CHANGES IN STOCKS = C INV CHANGES IN STOCKS / 1000  
 C NAT INV FIXED CAP FORMATION = C INV FIXED CAPITAL FORMATION / 1000  
 C NAT INV GROSS INVESTMENT = C INV GROSS INVESTMENT / 1000  
 C NAT INV PRIVATE SECTOR = C NAT INV FIXED CAP FORMATION - C NAT INV PUBLIC  
 C NAT INV PUBLIC = C INV PUBLIC AND PARA FIXED INVEST / 1000  
 C NAT NATIONAL SAVINGS EXCL TTADJ = C NAT GROSS NATIONAL SAVINGS - C NAT TERMS OF TRADE ADJUSTEMENT  
 C NAT NET FACTOR INCOME = (N FSR TOTAL FACTOR SERVICES - N FSP TOTAL FACTOR SERVICES) / (N EXS MLV INDEX QV BASE 1980 / 100)  
 C NAT ONE YEAR ICOR = PREVIOUS(C NAT INV GROSS INVESTMENT) / CHANGE(C GDP REAL QDPMP)  
 C NAT PRIVATE CONS PER CAPITA GR% = PCT(C NAT RESIDUAL PRIVATE CONS / S IND POPULATION IN THOU)  
 C NAT PUBLIC CONSUMPTION = 27.1 @ [1980]; PREVIOUS(C NAT PUBLIC CONSUMPTION) \* (1 + C NAT PUBLIC CONSUMPTION GR%)  
 C NAT PUBLIC CONSUMPTION GR% = < Yearly data: 1980 - 2000 >  
 C NAT RESIDUAL PRIVATE CONS = C NAT TOTAL CONSUMPTION - C NAT PUBLIC CONSUMPTION  
 C NAT RESIDUAL PRIVATE CONS GR% = PCT(C NAT RESIDUAL PRIVATE CONS)  
 C NAT RESOURCE CAP = -C NAT EXPORTS ADJ TERMS OF TRADE + C IMP IMPORTS OF GOODS & NFS  
 C NAT TERMS OF TRADE ADJUSTEMENT = (N EXS GOODS EXPORTS CFA BIL / (N IMP PRI IMPORT PRICE INDEX / 100)) - (N EXS GOODS EXPORTS CFA BIL / (N EXS PRI INDEX TOTAL GOOD))  
 C NAT TOTAL CONSUM PER CAPITA GR% = PCT(C NAT TOTAL CONSUMPTION / S IND POPULATION IN THOU)  
 C NAT TOTAL CONSUMPTION = C NAT GROSS DOMESTIC INCOME - (C INV GROSS INVESTMENT / 1000) + C IMP IMPORTS OF GOODS & NFS - C NAT EXPORTS ADJ TERMS OF TRADE  
 C NAT TOTAL CONSUMPTION GR% = PCT(C NAT TOTAL CONSUMPTION)  
 C NAT TOTAL CURRENT TRANSFERS = N TRS TOTAL CURRENT TRANSFERS / (N EXS MLV INDEX QV BASE 1980 / 100)  
 C NAT TOTAL RESOURCE AVAILABLE = C NAT GROSS DOMESTIC INCOME + C NAT RESOURCE GAP  
 C NFS NON FACTOR SERVICES CREDIT = N NFS NON FACTOR SERVICES CREDIT / (N EXS PRI INDEX TOTAL GOODS / 100)  
 C NFS NON FACTOR SERVICES DB GR% = PCT(C NFS NON FACTOR SERVICES DEBIT)  
 C NFS NON FACTOR SERVICES DEBIT = N NFS NON FACTOR SERVICES DEBIT / (N IMP PRI IMPORT PRICE INDEX / 100)  
 c ratio capital to good imports = C IMP CAPITAL GOODS / C IMP TOTAL GOODS IMPORTS MIL \* 100

C RATIO DOMESTIC SAVINGS OVER GDP=C NAT GROSS DOMESTIC SAVINGS TTADJ/C GDP REAL GDPMP\*100  
 c ratio educ\_health to good imports=C IMP EDUC\_HEALTH ITEMS/C IMP TOTAL GOODS IMPORTS MIL\*100  
 c ratio foodstuffs to good imports=C IMP FOODSTUFFS IMPORTS/C IMP TOTAL GOODS IMPORTS MIL\*100  
 RATIO GROSS INVESTMENT OVER GDP=(C INV GROSS INVESTMENT/1000)/C GDP REAL GDPMP\*100  
 c ratio interm to good imports=C IMP INTERMEDIATE GOODS/C IMP TOTAL GOODS IMPORTS MIL\*100  
 C RATIO MARGINAL SAVINGS RATE=CHANGE(C NAT GROSS NATIONAL SAVINGS)/CHANGE(C NAT GROSS NATIONAL INCOME)  
 C RATIO NATIONAL SAVINGS OVER GDP=C NAT GROSS NATIONAL SAVINGS/C GDP REAL GDPMP\*100  
 c ratio oil and petrol to good imports=C IMP PETROLEUM PRODUCTS/C IMP TOTAL GOODS IMPORTS MIL\*100  
 c ratio other cons to good imports=C IMP OTHER CONSUMER GOODS/C IMP TOTAL GOODS IMPORTS MIL\*100  
 C RATIO PRIVATE INVESTMENT OVER GDP=(C INV PRIVATE FIXED INVESTMENT/1000)/(C GDP REAL GDPMP)\*100  
 C RATIO PUBLIC INVEST OVER GDP=(C INV PUBLIC AND PARA FIXED INVEST/1000)/C GDP REAL GDPMP\*100  
 C RATIO RESOURCE GAP TO GDP=N RATIO IMPORTS OF GNFS TO GDP-N RATIO EXPORTS OF GNFS TO GDP  
 C RATIO TOTAL CONS TO GDP=C NAT TOTAL CONSUMPTION/C GDP REAL GDPMP\*100  
 C RATIO TOTAL TO TOTAL GOOD IMPORTS=C IMP TOTAL GOODS IMPORTS MIL/C IMP TOTAL GOODS IMPORTS MIL\*100  
 CAKE N EXS PRI INDEX COTTON =+100 @ [1980]; PREVIOUS(CAKE N EXS PRI INDEX COTTON)\*(1+N EXS PRI COTTON CAKE GRATEX)  
 CAKE N EXS VAL INDEX COTTON =+100 @ [1980]; PREVIOUS(CAKE N EXS VAL INDEX COTTON)\*(1+N EXS VAL COTTON CAKE GRATEX)  
 CEMENT N EXS PRI INDEX =+100 @ [1980]; PREVIOUS(CEMENT N EXS PRI INDEX)\*(1+N EXS PRI CEMENT GRATEX)  
 COCOA N EXS PRI INDEX =+100 @ [1980]; PREVIOUS(COCA N EXS PRI INDEX)\*(1+N EXS PRI COCOA GRATEX)  
 COEF INV PARAM A1 = < Yearly data: 1980 - 2000 >  
 COEF INV PARAM A2 = < Yearly data: 1980 - 2000 >  
 COEF INV PARAM A3 = < Yearly data: 1980 - 2000 >  
 COEF INV PARAM K = < Yearly data: 1980 - 2000 >  
 COFFEE N EXS PRI INDEX =+100 @ [1980]; PREVIOUS(COFFEE N EXS PRI INDEX)\*(1+N EXS PRI COFFEE GRATEX)  
 COTTON N EXS VAL INDEX GINNED =+100 @ [1980]; PREVIOUS(COTTON N EXS VAL INDEX GINNED)\*(1+N EXS VAL GINNED COTTON GRATEX)  
 CRUDE N EXS PRI INDEX OIL =+100 @ [1980]; PREVIOUS(CRUDE N EXS PRI INDEX OIL)\*(1+N EXS PRI CRUDE OIL GRATEX)  
 DEFLAT GDP CASH CROPS =100 @ [1980]; PREVIOUS(DEFLAT GDP CASH CROPS)\*(1+DEFLAT GDP CASH CROPS GRX)  
 DEFLAT GDP CASH CROPS GRX = < Yearly data: 1980 - 2000 >  
 DEFLAT GDP COMMERCE =100 @ [1980]; PREVIOUS(DEFLAT GDP COMMERCE)\*(1+DEFLAT GDP COMMERCE GRX)  
 DEFLAT GDP COMMERCE GRX = < Yearly data: 1980 - 2000 >  
 DEFLAT GDP CONSTRUCTION =100 @ [1980]; PREVIOUS(DEFLAT GDP CONSTRUCTION)\*(1+DEFLAT GDP CONSTRUCTION GRX)  
 DEFLAT GDP CONSTRUCTION GRX = < Yearly data: 1980 - 2000 >  
 DEFLAT GDP ELECT\_WATER =100 @ [1980]; PREVIOUS(DEFLAT GDP ELECT\_WATER)\*(1+DEFLAT GDP ELECT\_WATER GRX)  
 DEFLAT GDP ELECT\_WATER GRX = < Yearly data: 1980 - 2000 >  
 DEFLAT GDP FISHERIES =100 @ [1980]; PREVIOUS(DEFLAT GDP FISHERIES)\*(1+DEFLAT GDP FISHERIES GRX)  
 DEFLAT GDP FISHERIES GRX = < Yearly data: 1980 - 2000 >  
 DEFLAT GDP FOOD CROPS=100 @ [1980]; PREVIOUS(DEFLAT GDP FOOD CROPS)\*(1+DEFLAT GDP FOOD CROPS GRX)  
 DEFLAT GDP FOOD CROPS GRX = < Yearly data: 1980 - 2000 >  
 DEFLAT GDP FORESTRY =100 @ [1980]; PREVIOUS(DEFLAT GDP FORESTRY)\*(1+DEFLAT GDP FORESTRY GRX)  
 DEFLAT GDP FORESTRY GRX = < Yearly data: 1980 - 2000 >  
 DEFLAT GDP FRUITS AND VEGET=100 @ [1980]; PREVIOUS(DEFLAT GDP FRUITS AND VEGET)\*(1+DEFLAT GDP FRUITS AND VEGET GRX)  
 DEFLAT GDP FRUITS AND VEGET GRX = < Yearly data: 1980 - 2000 >  
 DEFLAT GDP LIVESTOCK =100 @ [1980]; PREVIOUS(DEFLAT GDP LIVESTOCK)\*(1+DEFLAT GDP LIVESTOCK GRX)  
 DEFLAT GDP LIVESTOCK GRX = < Yearly data: 1980 - 2000 >  
 DEFLAT GDP MANUFACTURING =100 @ [1980]; PREVIOUS(DEFLAT GDP MANUFACTURING)\*(1+DEFLAT GDP MANUFACTURING GRX)  
 DEFLAT GDP MANUFACTURING GRX = < Yearly data: 1980 - 2000 >  
 DEFLAT GDP MINING =100 @ [1980]; PREVIOUS(DEFLAT GDP MINING)\*(1+DEFLAT GDP MINING GRX)  
 DEFLAT GDP MINING GRX = < Yearly data: 1980 - 2000 >  
 DEFLAT GDP NET INDIRECT TAXES =100 @ [1980]; PREVIOUS(DEFLAT GDP NET INDIRECT TAXES)\*(1+DEFLAT GDP NET INDIRECT TAXES GRX)  
 DEFLAT GDP NET INDIRECT TAXES GRX = < Yearly data: 1980 - 2000 >  
 DEFLAT GDP OTHER SERVICES =100 @ [1980]; PREVIOUS(DEFLAT GDP OTHER SERVICES)\*(1+DEFLAT GDP OTHER SERVICES GRX)  
 DEFLAT GDP OTHER SERVICES GRX = < Yearly data: 1980 - 2000 >  
 DEFLAT GDP PUBLIC ADM =100 @ [1980]; PREVIOUS(DEFLAT GDP PUBLIC ADM)\*(1+DEFLAT GDP PUBLIC ADM GRX)  
 DEFLAT GDP PUBLIC ADM GRX = < Yearly data: 1980 - 2000 >  
 DEFLAT GDP TRANSPORT =100 @ [1980]; PREVIOUS(DEFLAT GDP TRANSPORT)\*(1+DEFLAT GDP TRANSPORT GRX)  
 DEFLAT GDP TRANSPORT GRX = < Yearly data: 1980 - 2000 >  
 EXPORTS N EXS VAL INDEX OTHER =+100 @ [1980]; PREVIOUS(EXPORTS N EXS VAL INDEX OTHER)\*(1+N EXS VAL OTHER EXPORTS GRATEX)  
 EXPORTS VOLUME GROWTH RATE % = < Yearly data: 1980 - 1995 >  
 GINNED N EXS PRI INDEX COTTON =+100 @ [1980]; PREVIOUS(GINNED N EXS PRI INDEX COTTON)\*(1+N EXS PRI GINNED COTTON GRATEX)  
 KERNEL CAKE N EXS VAL INDEX PALM =+100 @ [1980]; PREVIOUS(KERNEL CAKE N EXS VAL INDEX PALM)\*(1+KERNEL N EXS VAL CAKE PALM GRATEX)  
 KERNEL N EXS PRI INDEX CAKE PALM =+100 @ [1980]; PREVIOUS(KERNEL N EXS PRI INDEX CAKE PALM)\*(1+N EXS PRI PALM KERNEL CAKE GRATEX)

KERNEL N EXS PRI INDEX OIL PALM =+100 @ [1980]; PREVIOUS(KERNEL N EXS PRI INDEX OIL PALM)\*(1+N EXS PRI PALM KERNEL OIL GRATES)  
 KERNEL N EXS VAL CAKE PALM GRATE=PCT(N EXS VAL PALM KERNEL CAKE)  
 KERNEL N EXS VAL OIL PALM GRATE=PCT(N EXS VAL PALM KERNEL OIL)  
 KERNEL OIL N EXS VAL INDEX PALM =+100 @ [1980]; PREVIOUS(KERNEL OIL N EXS VAL INDEX PALM)\*(1+KERNEL N EXS VAL OIL PALM GRATES)  
 MANUF N EXS PRI INDEX RE\_EXPORTS =+100 @ [1980]; PREVIOUS(MANUF N EXS PRI INDEX RE\_EXPORTS)\*(1+N EXS PRI MANUF RE\_EXPORTS GRATE)  
 N BOP CAPITAL ACCOUNT BALANCE=+N CAP USD CAPITAL GRANTS+N CAP USD DIRECT FOREIGN INVEST+N CAP USD NET EXTERNAL LENDING MLT+N CAP USD ST & OTHER CAP INCL EA  
 N BOP CURRENT ACCOUNT EXCL TRANSF=+N BOP CURRENT ACCOUNT INCL TRANSF-N TRS USD TOTAL CURRENT TRANSFERS  
 N BOP CURRENT ACCOUNT EXCL TRANSF BIL CFA=+N BOP CURRENT ACCOUNT EXCL TRANSF+ N EXS AVGE DOLLAR CFAF EXRATE/1000  
 N BOP CURRENT ACCOUNT INCL TRANSF=+N BOP GOODS & SERVICES BALANCE+N TRS USD TOTAL CURRENT TRANSFERS  
 N BOP GOODS & SERVICES BALANCE=+N BOP RESOURCE BALANCE+N BOP NET FACTOR INCOME  
 N BOP NET FACTOR INCOME=+N FSR USD TOTAL FACTOR SERVICES-N FSP USD TOTAL FACTOR SERVICES  
 N BOP NET FACTOR INCOME BIL CFA=+N BOP NET FACTOR INCOME+N EXS AVGE DOLLAR CFAF EXRATE/1000  
 N BOP NON FACTOR SERVICES NET=+N USD NON FACTOR SERVICES CREDIT-N NFS USD NON F SERVICE DEBIT  
 N BOP OVERALL BALANCE=+N BOP CURRENT ACCOUNT INCL TRANSF+N BOP CAPITAL ACCOUNT BALANCE  
 N BOP OVERALL FINANCING=-N BOP OVERALL BALANCE  
 N BOP RESIDUAL UNFINANCED CAP=+N BOP USD RESIDUAL UNFINANCED CAP+N EXS AVGE DOLLAR CFAF EXRATE/1000  
 N BOP RESOURCE BALANCE=+N BOP TRADE BALANCE FOB\_FOB+N BOP NON FACTOR SERVICES NET  
 N BOP TRADE BALANCE FOB\_FOB=+N USD GOODS EXPORTS MIL-N IMF USD TOTAL GOODS IMPORTS FOB  
 N BOP USD RESIDUAL UNFINANCED CAP=+N BOP OVERALL FINANCING-N RES USD CHANGES IN NFA EXCL IMF-N CAP USD IMF NET CREDIT-N CAP USD IDA NET SAL RESOURCES-N CAP  
 EXTERNAL ARREARS-N CAP USD RESCHL TOTAL NET SAVINGS-N CAP USD TOTAL DEBT FORG\_CANCEL  
 N CAP BIL CUMUL PROG AID DISB =+0 @ [1980];PREVIOUS(N CAP BIL CUMUL PROG AID DISB)+N CAP BIL PROG AID DISB-N CAP BIL PROG AID REPAYMENT  
 N CAP BIL NET PROGRAM AID=+N CAP BIL PROG AID DISB-N CAP BIL PROG AID REPAYMENT-N CAP BIL PROG AID INT & CHARGES  
 N CAP BIL PROG AID COMMITMENTS = < Yearly data: 1980 - 2000 >  
 N CAP BIL PROG AID DISB = < Yearly data: 1980 - 2000 >  
 N CAP BIL PROG AID INT & CHARGES=+0.035\*PREVIOUS((N CAP BIL CUMUL PROG AID DISB-N CAP BIL PROG AID REPAYMENT))  
 N CAP BIL PROG AID REPAYMENT = < Yearly data: 1980 - 2000 >  
 N CAP CAPITAL GRANTS=+6.2 @ [1980]; PREVIOUS(N CAP CAPITAL GRANTS)\*(1+N CAP CAPITAL GRANTS DISB GR%)  
 N CAP CAPITAL GRANTS DISB GR% = < Yearly data: 1980 - 2000 >  
 N CAP CHANGES EXT INT\_ARR = < Yearly data: 1980 - 2000 >  
 N CAP CHANGES EXT PRINC\_ARR = < Yearly data: 1980 - 2000 >  
 N CAP CHANGES EXTERNAL ARREARS=+N CAP CHANGES EXT PRINC\_ARR+N CAP CHANGES EXT INT\_ARR  
 N CAP CUMUL EXTERNAL ARREARS =+0 @ [1980];PREVIOUS(N CAP CUMUL EXTERNAL ARREARS )+N CAP CHANGES EXTERNAL ARREARS  
 N CAP DEBT FORG\_CANCEL FRANCE = < Yearly data: 1980 - 2000 >  
 N CAP DEBT FORG\_CANCEL OTHERS = < Yearly data: 1980 - 2000 >  
 N CAP DEBT FORG\_CANCEL W GERMANY = < Yearly data: 1980 - 2000 >  
 N CAP DISBURSEMENT MLT = < Yearly data: 1980 - 2000 >  
 N CAP IDA CUMUL SAL DISB=+0 @ [1980];PREVIOUS(N CAP IDA CUMUL SAL DISB)+N CAP IDA SAL DISBURSEMENTS-N CAP IDA SAL REPAYMENT  
 N CAP IDA NET SAL RESOURCES=+N CAP IDA SAL DISBURSEMENTS-N CAP IDA SAL REPAYMENT-N CAP IDA SAL INT & CHARGES  
 N CAP IDA SAL DISBURSEMENTS = < Yearly data: 1980 - 2000 >  
 N CAP IDA SAL INT & CHARGES=+0.0075\*PREVIOUS((N CAP IDA CUMUL SAL DISB-N CAP IDA SAL REPAYMENT))  
 N CAP IDA SAL REPAYMENT = < Yearly data: 1980 - 2000 >  
 N CAP IMF CUMUL SAF ESAF DISB=+0 @ [1980];PREVIOUS(N CAP IMF CUMUL SAF ESAF DISB)+N CAP IMF SAF ESAF DISB-N CAP IMF SAF ESAF REPAY  
 N CAP IMF INTEREST CHARGES = < Yearly data: 1980 - 2000 >  
 N CAP IMF NET CREDIT=+N CAP IMF NET STAND BY RESOURCES+N CAP IMF NET SAF ESAF RESOURCES  
 N CAP IMF NET SAF ESAF RESOURCES=+N CAP IMF SAF ESAF DISB-N CAP IMF SAF ESAF REPAY-N CAP IMF SAF ESAF CHARGES  
 N CAP IMF NET STAND BY RESOURCES=+N CAP IMF PURCHASES-N CAP IMF REPURCHASES-N CAP IMF INTEREST CHARGES  
 N CAP IMF PURCHASES = < Yearly data: 1980 - 2000 >  
 N CAP IMF REPURCHASES = < Yearly data: 1980 - 2000 >  
 N CAP IMF SAF ESAF CHARGES=+0.005\*PREVIOUS((N CAP IMF CUMUL SAF ESAF DISB-N CAP IMF SAF ESAF REPAY))  
 N CAP IMF SAF ESAF DISB = < Yearly data: 1980 - 2000 >  
 N CAP IMF SAF ESAF REPAY = < Yearly data: 1980 - 2000 >  
 N CAP NET DIRECT FOREIGN INVEST = < Yearly data: 1980 - 2000 >  
 N CAP NET EXTERNAL LENDING MLT=+N CAP DISBURSEMENT MLT-N CAP PRINCIPAL MLT  
 N CAP PRINCIPAL MLT = < Yearly data: 1980 - 2000 >  
 N CAP RESCHL CUMUL SAVINGS DOD=+0 @ [1980]; PREVIOUS(N CAP RESCHL CUMUL SAVINGS DOD)+N CAP RESCHL TOTAL SAVINGS-N CAP RESCHL REPAYMENT  
 N CAP RESCHL INTEREST SAVINGS = < Yearly data: 1980 - 2000 >  
 N CAP RESCHL MORATORIUM INTEREST=+0.05\*PREVIOUS(N CAP RESCHL CUMUL SAVINGS DOD)  
 N CAP RESCHL NET RESOURCES=+N CAP RESCHL TOTAL SAVINGS-N CAP RESCHL MORATORIUM INTEREST  
 N CAP RESCHL PRINCIPAL SAVINGS = < Yearly data: 1980 - 2000 >  
 N CAP RESCHL REPAYMENT = < Yearly data: 1980 - 2000 >

N CAP RESCHL TOTAL SAVINGS= $\rightarrow$ N CAP RESCHL PRINCIPAL SAVINGS+N CAP RESCHL INTEREST SAVINGS  
 N CAP SHT & OTHER CAPITAL INCL EAD = < Yearly data: 1980 - 2000 >  
 N CAP SPA COMMITMENTS = < Yearly data: 1980 - 2000 >  
 N CAP SPA CUMUL DISBURSEMENTS = $\rightarrow$ 0 @ [1980];PREVIOUS(N CAP SPA CUMUL DISBURSEMENTS )+N CAP SPA DISBURSEMENTS-N CAP SPA REPAYMENT  
 N CAP SPA DISBURSEMENTS = < Yearly data: 1980 - 2000 >  
 N CAP SPA INT & CHARGES= $\rightarrow$ 0.035\*PREVIOUS((N CAP SPA CUMUL DISBURSEMENTS-N CAP SPA REPAYMENT))  
 N CAP SPA REPAYMENT = < Yearly data: 1980 - 2000 >  
 N CAP SPA RESOURCES EXCL IDA & IMF= $\rightarrow$ N CAP SPA DISBURSEMENTS-N CAP SPA REPAYMENT-N CAP SPA INT & CHARGES  
 N CAP TOTAL DEBT FORG\_CANCELLED= $\rightarrow$ N CAP DEBT FORG\_CANCEL FRANCE+N CAP DEBT FORG\_CANCEL W GERMANY+N CAP DEBT FORG\_CANCEL OTHERS  
 N CAP USD BIL NET PROGRAM AID= $\rightarrow$ N CAP BIL NET PROGRAM AID/N EXS AVGE DOLLAR CFAF EXRATE\*1000  
 N CAP USD CAPITAL GRANTS= $\rightarrow$ N CAP CAPITAL GRANTS/N EXS AVGE DOLLAR CFAF EXRATE\*1000  
 N CAP USD CHANGES EXT INT\_ARR= $\rightarrow$ N CAP CHANGES EXT INT\_ARR/N EXS AVGE DOLLAR CFAF EXRATE\*1000  
 N CAP USD CHANGES EXT PRINC\_ARR= $\rightarrow$ N CAP CHANGES EXT PRINC\_ARR/N EXS AVGE DOLLAR CFAF EXRATE\*1000  
 N CAP USD CHANGES EXTERNAL ARREARS= $\rightarrow$ N CAP CHANGES EXTERNAL ARREARS/N EXS AVGE DOLLAR CFAF EXRATE\*1000  
 N CAP USD DIRECT FOREIGN INVEST= $\rightarrow$ N CAP NET DIRECT FOREIGN INVEST/N EXS AVGE DOLLAR CFAF EXRATE\*1000  
 N CAP USD DISBURSEMENT MLT= $\rightarrow$ N CAP DISBURSEMENT MLT/N EXS AVGE DOLLAR CFAF EXRATE\*1000  
 N CAP USD IDA NET SAL RESOURCES= $\rightarrow$ N CAP IDA NET SAL RESOURCES/N EXS AVGE DOLLAR CFAF EXRATE\*1000  
 N CAP USD IDA SAL DISBURSEMENTS= $\rightarrow$ N CAP IDA SAL DISBURSEMENTS/N EXS AVGE DOLLAR CFAF EXRATE\*1000  
 N CAP USD IMF NET CREDIT= $\rightarrow$ N CAP IMF NET CREDIT/N EXS AVGE DOLLAR CFAF EXRATE\*1000  
 N CAP USD IMF SAF ESAF DISB= $\rightarrow$ N CAP IMF SAF ESAF DISB/N EXS AVGE DOLLAR CFAF EXRATE\*1000  
 N CAP USD NET EXTERNAL LENDING MLT= $\rightarrow$ N CAP NET EXTERNAL LENDING MLT/N EXS AVGE DOLLAR CFAF EXRATE\*1000  
 N CAP USD NET INTEREST SAVINGS= $\rightarrow$ N CAP USD RESCHL TOTAL NET SAVINGS-N CAP USD PRINCIPAL SAVINGS  
 N CAP USD PRINCIPAL MLT= $\rightarrow$ N CAP PRINCIPAL MLT/N EXS AVGE DOLLAR CFAF EXRATE\*1000  
 N CAP USD PRINCIPAL SAVINGS= $\rightarrow$ N CAP RESCHL PRINCIPAL SAVINGS/N EXS AVGE DOLLAR CFAF EXRATE\*1000  
 N CAP USD RESCHL TOTAL NET SAVINGS= $\rightarrow$ N CAP RESCHL NET RESOURCES/N EXS AVGE DOLLAR CFAF EXRATE\*1000  
 N CAP USD SPA DISBURSEMENTS= $\rightarrow$ N CAP SPA DISBURSEMENTS/N EXS AVGE DOLLAR CFAF EXRATE\*1000  
 N CAP USD SPA RESOURCES= $\rightarrow$ N CAP SPA RESOURCES EXCL IDA & IMF/N EXS AVGE DOLLAR CFAF EXRATE\*1000  
 N CAP USD ST & OTHER CAP INCL EAD= $\rightarrow$ N CAP SHT & OTHER CAPITAL INCL EAD/N EXS AVGE DOLLAR CFAF EXRATE\*1000  
 N CAP USD TOTAL DEBT FORG\_CANCEL= $\rightarrow$ N CAP TOTAL DEBT FORG\_CANCELLED/N EXS AVGE DOLLAR CFAF EXRATE\*1000  
 N DOM PRICE OIL PALM FRUITS CFA\_KG= $\rightarrow$ 37.5 @ [1980];PREVIOUS(N DOM PRICE OIL PALM FRUITS CFA\_KG)\*(1+N DOM PRICE OIL PALM FRUITS GR%)  
 N DOM PRICE OIL PALM FRUITS GR% = < Yearly data: 1980 - 2000 >  
 N DOM PRICE PRODD COFFEE GR% = < Yearly data: 1980 - 2000 >  
 N DOM PROD PRICE COFFEE CFA\_KG = $\rightarrow$ 200 @ [1980];PREVIOUS(N DOM PROD PRICE COFFEE CFA\_KG)\*(1+N DOM PRICE PRODD COFFEE GR%)  
 N DOM PROD PRICE SEED COTTON CFA\_KG = $\rightarrow$ 65 @ [1980];PREVIOUS(N DOM PROD PRICE SEED COTTON CFA\_KG)\*(1+N DOM PROD PRICE SEED COTTON GR%)  
 N DOM PROD PRICE SEED COTTON GR% = < Yearly data: 1980 - 2000 >  
 N DOM VAL COFFEE CFA MIL= $\rightarrow$ R EXS VOL COFFEE=N DOM PROD PRICE COFFEE CFA\_KG  
 N DOM VAL OIL PALM FRUITS CFA MIL= $\rightarrow$ R PROD VOL OIL PALM FRUITS TH TONS=N DOM PRICE OIL PALM FRUITS CFA\_KG  
 N DOM VAL SEED COTTON CFA MIL= $\rightarrow$ R EXS VOL GROSS COTTON PRODUCTION=N DOM PROD PRICE SEED COTTON CFA\_KG  
 N EXS AVGE DOLLAR CFAF EXRATE = < Yearly data: 1980 - 2000 >  
 N EXS END OF PERIOD EXRATE = < Yearly data: 1980 - 2000 >  
 N EXS EXPORTS OF GOODS & NFS= $\rightarrow$ N EXS GOODS EXPORTS CFA BIL+N NFS NON FACTOR SERVICES CREDIT  
 N EXS GOODS EXPORTS CFA BIL= $\rightarrow$ N EXS VAL OIL PALM PRODUCTS+N EXS VAL COTTON PRODUCTS+N EXS VAL COCOA+N EXS VAL COFFEE+N EXS VAL CRUDE OIL+N EXS VAL CEMENT+N  
 N EXS GOODS EXPORTS GRATEX= $\rightarrow$ PCT(N EXS GOODS EXPORTS CFA BIL)  
 N EXS INTERNATIONAL INFLATION MUV = < Yearly data: 1980 - 1995 >  
 N EXS IPD GDP DEFLATOR BASE 1980= $\rightarrow$ N GDP GDP CURRENT AT MP/C GDP REAL GDPMP\*100  
 N EXS IPD GROWTH RATEX= $\rightarrow$ 0.1019 @ [1980]; PCT(N EXS IPD GDP DEFLATOR BASE 1980)  
 N EXS MUV GRATE GROUP QV% = < Yearly data: 1980 - 2000 >  
 N EXS MUV INDEX QV BASE 1980=100 @ [1980] ; PREVIOUS(N EXS MUV INDEX QV BASE 1980)\*(1+N EXS MUV GRATE GROUP QV%)  
 N EXS PRI BARREL OF CRUDE OIL =10.373 @ [1980] ; PREVIOUS(N EXS PRI BARREL OF CRUDE OIL )\*(1+N EXS PRI CRUDE OIL GRATEX)  
 N EXS PRI CEMENT =175 @ [1980] ; PREVIOUS(N EXS PRI CEMENT )\*(1+N EXS PRI CEMENT GRATEX)  
 N EXS PRI CEMENT GRATEX = < Yearly data: 1980 - 2000 >  
 N EXS PRI COCOA =770 @ [1980] ; PREVIOUS(N EXS PRI COCOA )\*(1+N EXS PRI COCOA GRATEX)  
 N EXS PRI COCOA GRATEX = < Yearly data: 1980 - 2000 >  
 N EXS PRI COFFEE =614.75 @ [1980] ; PREVIOUS(N EXS PRI COFFEE )\*(1+N EXS PRI COFFEE GRATEX)  
 N EXS PRI COFFEE GRATEX = < Yearly data: 1980 - 2000 >  
 N EXS PRI COTTON CAKE =35.3 @ [1980] ; PREVIOUS(N EXS PRI COTTON CAKE )\*(1+N EXS PRI COTTON CAKE GRATEX)  
 N EXS PRI COTTON CAKE GRATEX = < Yearly data: 1980 - 2000 >  
 N EXS PRI COTTON PRODUCTS=(N EXS PRI GINNED COTTON+N EXS PRI COTTON SEED+N EXS PRI COTTON CAKE)/3  
 N EXS PRI COTTON PRODUCTS GRATEX= $\rightarrow$ PCT(N EXS PRI COTTON PRODUCTS)  
 N EXS PRI COTTON SEED =24.425 @ [1980] ; PREVIOUS(N EXS PRI COTTON SEED )\*(1+N EXS PRI COTTON SEED GRATEX)

N EXS PRI COTTON SEED GRATEX = < Yearly data: 1980 - 2000 >  
 N EXS PRI CRUDE OIL GRATEX = < Yearly data: 1980 - 2000 >  
 N EXS PRI EXPORTS AVGE CFA\_KG=>N EXS GOODS EXPORTS CFA BIL/R EXS VOL EXPORTS THOU TONS\*1000  
 N EXS PRI EXPORTS GRATEX=>PCT(N EXS PRI EXPORTS AVGE CFA\_KG)  
 N EXS PRI GINNED COTTON =258.285 @ [1980] ; PREVIOUS(N EXS PRI GINNED COTTON )\*(1+N EXS PRI GINNED COTTON GRATEX)  
 N EXS PRI GINNED COTTON GRATEX = < Yearly data: 1980 - 2000 >  
 N EXS PRI GROSS COTTON PRODUCTION =16.5 @ [1980] ; PREVIOUS(N EXS PRI GROSS COTTON PRODUCTION )\*(1+R EXS VOL GROSS COTTON GRATEX)  
 N EXS PRI INDEX OIL PALM =+100 @ [1980]; PREVIOUS(N EXS PRI INDEX OIL PALM)\* (1+N EXS PRI PALM OIL GRATEX)  
 N EXS PRI INDEX OIL PALM PRODUCTS =+100 @ [1980]; PREVIOUS(N EXS PRI INDEX OIL PALM PRODUCTS )\*(1+N EXS PRI OIL PALM PROD GRATEX)  
 N EXS PRI INDEX TOTAL GOODS =+100 @ [1980]; PREVIOUS(N EXS PRI INDEX TOTAL GOODS )\*(1+N EXS PRI EXPORTS GRATEX)  
 N EXS PRI MANUF RE\_EXPORTS =369.7 @ [1980] ; PREVIOUS(N EXS PRI MANUF RE\_EXPORTS )\*(1+N EXS PRI MANUF RE\_EXPORTS GRATEX)  
 N EXS PRI MANUF RE\_EXPORTS GRATEX = < Yearly data: 1980 - 2000 >  
 N EXS PRI OIL PALM PROD GRATEX=>PCT(N EXS PRI OIL PALM PRODUCTS)  
 N EXS PRI OIL PALM PRODUCTS=>(N EXS PRI PALM OIL+N EXS PRI PALM KERNEL OIL+N EXS PRI PALM KERNEL CAKE)/3  
 N EXS PRI OTHER EXPORTS =197.56 @ [1980] ; PREVIOUS(N EXS PRI OTHER EXPORTS )\*(1+N EXS PRI OTHER EXPORTS GRATEX)  
 N EXS PRI OTHER EXPORTS GRATEX = < Yearly data: 1980 - 2000 >  
 N EXS PRI PALM KERNEL CAKE =34.815 @ [1980] ; PREVIOUS(N EXS PRI PALM KERNEL CAKE )\*(1+N EXS PRI PALM KERNEL CAKE GRATEX)  
 N EXS PRI PALM KERNEL CAKE GRATEX = < Yearly data: 1980 - 2000 >  
 N EXS PRI PALM KERNEL OIL =117.468 @ [1980] ; PREVIOUS(N EXS PRI PALM KERNEL OIL )\*(1+N EXS PRI PALM KERNEL OIL GRATEX)  
 N EXS PRI PALM KERNEL OIL GRATEX = < Yearly data: 1980 - 2000 >  
 N EXS PRI PALM OIL =129.807 @ [1980] ; PREVIOUS(N EXS PRI PALM OIL )\*(1+N EXS PRI PALM OIL GRATEX)  
 N EXS PRI PALM OIL GRATEX = < Yearly data: 1980 - 2000 >  
 N EXS USD EXPORT GOODS & ALL SCES=>N EXS EXPORTS OF GOODS & NFS+N FSR USD TOTAL FACTOR SERVICES  
 N EXS VAL CEMENT = < Yearly data: 1980 - 2000 >  
 N EXS VAL CEMENT GRATEX=>PCT(N EXS VAL CEMENT )  
 N EXS VAL COCOA=>R EXS VOL COCOA\*N EXS PRI COCOA/1000  
 N EXS VAL COCOA GRATEX=>PCT(N EXS VAL COCOA )  
 N EXS VAL COFFEE=>R EXS VOL COFFEE\*N EXS PRI COFFEE/1000  
 N EXS VAL COFFEE GRATEX=>PCT(N EXS VAL COFFEE )  
 N EXS VAL COTTON CAKE=>R EXS VOL COTTON CAKE\*N EXS PRI COTTON CAKE/1000  
 N EXS VAL COTTON CAKE GRATEX=>PCT(N EXS VAL COTTON CAKE )  
 N EXS VAL COTTON PRODUCTS=>N EXS VAL GINNED COTTON+N EXS VAL COTTON SEED+N EXS VAL COTTON CAKE  
 N EXS VAL COTTON PRODUCTS GRATEX=>PCT(N EXS VAL COTTON PRODUCTS )  
 N EXS VAL COTTON SEED=>R EXS VOL COTTON SEED\*N EXS PRI COTTON SEED/1000  
 N EXS VAL COTTON SEED GRATEX=>PCT(N EXS VAL COTTON SEED )  
 N EXS VAL CRUDE OIL=>R EXS VOL CRUDE OIL MIL BARRELS\*N EXS PRI BARREL OF CRUDE OIL  
 N EXS VAL CRUDE OIL GRATEX=>PCT(N EXS VAL CRUDE OIL )  
 N EXS VAL GINNED COTTON=>R EXS VOL GINNED COTTON\*N EXS PRI GINNED COTTON/1000  
 N EXS VAL GINNED COTTON GRATEX=>PCT(N EXS VAL GINNED COTTON )  
 N EXS VAL INDEX CEMENT =+100 @ [1980]; PREVIOUS(N EXS VAL INDEX CEMENT )\*(1+N EXS VAL CEMENT GRATEX)  
 N EXS VAL INDEX COCOA =+100 @ [1980]; PREVIOUS(N EXS VAL INDEX COCOA )\*(1+N EXS VAL COCOA GRATEX)  
 N EXS VAL INDEX COFFEE =+100 @ [1980]; PREVIOUS(N EXS VAL INDEX COFFEE )\*(1+N EXS VAL COFFEE GRATEX)  
 N EXS VAL MANUF RE\_EXPORTS = < Yearly data: 1980 - 2000 >  
 N EXS VAL MANUF RE\_EXPORTS GRATEX=>PCT(N EXS VAL MANUF RE\_EXPORTS )  
 N EXS VAL OIL PALM GRATEX=>PCT(N EXS VAL PALM OIL)  
 N EXS VAL OIL PALM PROD GRATEX=>PCT(N EXS VAL OIL PALM PRODUCTS)  
 N EXS VAL OIL PALM PRODUCTS=N EXS VAL PALM OIL+N EXS VAL PALM KERNEL OIL+N EXS VAL PALM KERNEL CAKE  
 N EXS VAL OTHER EXPORTS = < Yearly data: 1980 - 2000 >  
 N EXS VAL OTHER EXPORTS GRATEX=>PCT(N EXS VAL OTHER EXPORTS )  
 N EXS VAL PALM KERNEL CAKE=>R EXS VOL PALM KERNEL CAKE\*N EXS PRI PALM KERNEL CAKE/1000  
 N EXS VAL PALM KERNEL OIL=>R EXS VOL PALM KERNEL OIL\*N EXS PRI PALM KERNEL OIL/1000  
 N EXS VAL PALM OIL=>R EXS VOL PALM OIL\*N EXS PRI PALM OIL/1000  
 N EXT EXTERNAL TERMS OF TRADE GR%=>PCT(N EXT EXTERNAL TERMS OF TRADE INDX)  
 N EXT EXTERNAL TERMS OF TRADE INDX=>N EXS PRI INDEX TOTAL GOODS/N IMP PRI IMPORT PRICE INDEX\*100  
 N FSP DIRECT INVEST INCOME=>+0.7 @ [1980]; PREVIOUS(N FSP DIRECT INVEST INCOME)\* (1+N FSR DIRECT INVEST INCOME GR%)  
 N FSP INTEREST ON SHORT TERM DEBT = < Yearly data: 1980 - 2000 >  
 N FSP OTHER FACTOR SERVICES = < Yearly data: 1980 - 2000 >  
 N FSP TOTAL FACTOR SERVICES=>N FSP OTHER FACTOR SERVICES+N FSP WORKERS REMITTANCES+N FSP INTEREST ON SHORT TERM DEBT+N FSP TOTAL INTEREST SCHEDULED MLT+N P  
 N FSP TOTAL INTEREST SCHEDULED MLT = < Yearly data: 1980 - 2000 >  
 N FSP USD DIRECT INVEST INCOME=>N FSP DIRECT INVEST INCOME/N EXS AVGE DOLLAR CFAF EXRATE\*1000

N FSP USD INTEREST ON SHORT TERM=N FSP INTEREST ON SHORT TERM DEBT/N EXS AVGE DOLLAR CFAF EXRATE\*1000  
 N FSP USD OTHER FACTOR SERVICES=N FSP OTHER FACTOR SERVICES/N EXS AVGE DOLLAR CFAF EXRATE\*1000  
 N FSP USD TOTAL FACTOR SERVICES=N FSP TOTAL FACTOR SERVICES/N EXS AVGE DOLLAR CFAF EXRATE\*1000  
 N FSP USD TOTAL INTEREST MLT=N FSP TOTAL INTEREST SCHEDULED MLT/N EXS AVGE DOLLAR CFAF EXRATE\*1000  
 N FSP USD WORKERS REMITTANCES=N FSP WORKERS REMITTANCES/N EXS AVGE DOLLAR CFAF EXRATE\*1000  
 N FSP WORKERS REMITTANCES = < Yearly data: 1980 - 2000 >  
 N FSR DIRECT INVEST INCOME GR% = < Yearly data: 1980 - 2000 >  
 N FSR INTEREST ON SHORT TERM = < Yearly data: 1980 - 2000 >  
 N FSR INTEREST RECEIPTS ON NFA=+0.08\*N RES RESERVES LEVEL EXCL IMF  
 N FSR OTHER FACTOR SERVICES = < Yearly data: 1980 - 2000 >  
 N FSR TOTAL FACTOR SERVICES=N FSR OTHER FACTOR SERVICES+N FSR WORKERS REMITTANCES+N FSR INTEREST ON SHORT TERM+N FSR INTEREST RECEIPTS ON NFA  
 N FSR USD INTEREST ON SHORT TERM=N FSR INTEREST ON SHORT TERM/N EXS AVGE DOLLAR CFAF EXRATE\*1000  
 N FSR USD INTEREST REC ON NFA=N FSR INTEREST RECEIPTS ON NFA/N EXS AVGE DOLLAR CFAF EXRATE\*1000  
 N FSR USD OTHER FACTOR SERVICES=N FSR OTHER FACTOR SERVICES/N EXS AVGE DOLLAR CFAF EXRATE\*1000  
 N FSR USD TOTAL FACTOR SERVICES=N FSR TOTAL FACTOR SERVICES/N EXS AVGE DOLLAR CFAF EXRATE\*1000  
 N FSR USD WORKERS REMITTANCES=N FSR WORKERS REMITTANCES/N EXS AVGE DOLLAR CFAF EXRATE\*1000  
 N FSR WORKERS REMITTANCES = < Yearly data: 1980 - 2000 >  
 N GDP %SHARE NET INDIRECT TAXES =+N GDP NET INDIRECT TAXES/N GDP GDP CURRENT AT MP  
 N GDP %SHARE PRIMARY SECTOR AT FC=N GDP PRIMARY SECTOR/N GDP GDP CURRENT AT MP  
 N GDP %SHARE SECONDARY SECTOR AT FC=N GDP SECONDARY SECTOR/N GDP GDP CURRENT AT MP  
 N GDP %SHARE TERTIARY SECTOR AT FC=N GDP TERTIARY SECTOR/N GDP GDP CURRENT AT MP  
 N GDP AGRICULTURE=N GDP FOOD CROPS+N GDP FRUITS AND VEGETABLES+N GDP CASH CROPS  
 N GDP CASH CROPS =+C GDP CASH CROPS \*(DEFLAT GDP CASH CROPS /100)  
 N GDP COMMERCE =+C GDP COMMERCE \*(DEFLAT GDP COMMERCE /100)  
 N GDP CONSTRUCTION =+C GDP CONSTRUCTION \*(DEFLAT GDP CONSTRUCTION /100)  
 N GDP ELECTRICITY AND WATER =+C GDP ELECTRICITY AND WATER \*(DEFLAT GDP ELECT\_WATER /100)  
 N GDP FISHERIES =+C GDP FISHERIES \*(DEFLAT GDP FISHERIES /100)  
 N GDP FOOD CROPS=+C GDP FOOD CROPS\*(DEFLAT GDP FOOD CROPS/100)  
 N GDP FORESTRY =+C GDP FORESTRY \*(DEFLAT GDP FORESTRY /100)  
 N GDP FRUITS AND VEGETABLES=+C GDP FRUITS AND VEGETABLES\*(DEFLAT GDP FRUITS AND VEGET/100)  
 N GDP GDP CURRENT AT MP=N GDP VALUE\_ADDED AT FC+N GDP NET INDIRECT TAXES  
 N GDP LIVESTOCK =+C GDP LIVESTOCK \*(DEFLAT GDP LIVESTOCK /100)  
 N GDP MANUFACTURING =+C GDP MANUFACTURING \*(DEFLAT GDP MANUFACTURING /100)  
 N GDP MINING =+C GDP MINING \*(DEFLAT GDP MINING /100)  
 N GDP NET INDIRECT TAXES =+C GDP NET INDIRECT TAXES \*(DEFLAT GDP NET INDIRECT TAXES /100)  
 N GDP OTHER PRIMARY=N GDP LIVESTOCK+N GDP FORESTRY+N GDP FISHERIES  
 N GDP OTHER SERVICES =+C GDP OTHER SERVICES \*(DEFLAT GDP OTHER SERVICES /100)  
 N GDP PRIMARY SECTOR=N GDP AGRICULTURE+N GDP OTHER PRIMARY  
 N GDP PUBLIC ADMINISTRATION =+C GDP PUBLIC ADMINISTRATION \*(DEFLAT GDP PUBLIC ADM/100)  
 N GDP SECONDARY SECTOR=N GDP MINING+N GDP MANUFACTURING+N GDP CONSTRUCTION+N GDP ELECTRICITY AND WATER  
 N GDP TERTIARY SECTOR=N GDP COMMERCE+N GDP TRANSPORT+N GDP PUBLIC ADMINISTRATION+N GDP OTHER SERVICES  
 N GDP TRANSPORT =+C GDP TRANSPORT \*(DEFLAT GDP TRANSPORT /100)  
 N GDP USD NOMINAL GDP CFA=N GDP GDP CURRENT AT MP/N EXS AVGE DOLLAR CFAF EXRATE\*1000  
 N GDP VALUE\_ADDED AT FC=N GDP PRIMARY SECTOR+N GDP SECONDARY SECTOR+N GDP TERTIARY SECTOR  
 N IMP CAPITAL GOODS=+C IMP CAPITAL GOODS\*(N IMP PRI IMPORT PRICE INDEX/100)  
 N IMP EDUC\_HEALTH ITEMS=+C IMP EDUC\_HEALTH ITEMS\*(N IMP PRI IMPORT PRICE INDEX/100)  
 N IMP FOODSTUFFS IMPORTS=+C IMP FOODSTUFFS IMPORTS\*(N IMP PRI IMPORT PRICE INDEX/100)  
 N IMP GOODS AND ALL SERVICES=N IMP IMPORTS OF GOODS & NFS+N FSP TOTAL FACTOR SERVICES  
 N IMP IMPORTS OF GOODS & NFS=N IMP TOTAL GOODS IMPORTS FOB BIL+N NFS NON FACTOR SERVICES DEBIT  
 N IMP INTERMEDIATE GOODS=+C IMP INTERMEDIATE GOODS\*(N IMP PRI IMPORT PRICE INDEX/100)  
 N IMP OTHER CONSUMER GOODS=+C IMP OTHER CONSUMER GOODS\*(N IMP PRI IMPORT PRICE INDEX/100)  
 N IMP PETROLEUM PRODUCTS=+C IMP PETROLEUM PRODUCTS\*(N IMP PRI IMPORT PRICE INDEX/100)  
 N IMP PRI IMPORT PRICE INDEX=100 @ [1980];PREVIOUS(N IMP PRI IMPORT PRICE INDEX)\*(1+N IMP PRI IMPORT PRICE INDEX GR%)  
 N IMP PRI IMPORT PRICE INDEX GR% = < Yearly data: 1980 - 2000 >  
 N IMP TOTAL GOODS IMPORTS FOB BIL=(N IMP CAPITAL GOODS+N IMP INTERMEDIATE GOODS+N IMP PETROLEUM PRODUCTS+N IMP OTHER CONSUMER GOODS+N IMP EDUC\_HEALTH ITEM)  
 N IMP TOTAL GOODS IMPORTS FOB MIL=N IMP TOTAL GOODS IMPORTS FOB BIL\*1000  
 N IMP USD CAPITAL GOODS=N IMP CAPITAL GOODS/N EXS AVGE DOLLAR CFAF EXRATE  
 N IMP USD EDUC\_HEALTH ITEMS=N IMP EDUC\_HEALTH ITEMS/N EXS AVGE DOLLAR CFAF EXRATE  
 N IMP USD FOODSTUFFS IMPORTS=N IMP FOODSTUFFS IMPORTS/N EXS AVGE DOLLAR CFAF EXRATE  
 N IMP USD GOODS & NFS=N IMP USD TOTAL GOODS IMPORTS FOB+N NFS USD NON F SERVICE DEBIT

N IMP USD GOODS AND ALL SERVICES=N IMP GOODS AND ALL SERVICES/N EXS AVGE DOLLAR CFAF EXRATE=1000  
 N IMP USD INTERMEDIATE GOODS=N IMP INTERMEDIATE GOODS/N EXS AVGE DOLLAR CFAF EXRATE  
 N IMP USD OTHER CONSUMER GOODS=N IMP OTHER CONSUMER GOODS/N EXS AVGE DOLLAR CFAF EXRATE  
 N IMP USD PETROLEUM PRODUCTS=N IMP PETROLEUM PRODUCTS/N EXS AVGE DOLLAR CFAF EXRATE  
 N IMP USD TOTAL GOODS IMPORTS FOB=N IMP USD CAPITAL GOODS+N IMP USD INTERMEDIATE GOODS+N IMP USD PETROLEUM PRODUCTS+N IMP USD OTHER CONSUMER GOODS+N IMP U  
 N INV CHANGES IN STOCKS=N INV GROSS INVESTMENT-N INV FIXED CAPITAL FORMATION  
 N INV CHANGES IN BIL CFA=N INV CHANGES IN STOCKS/1000  
 N INV FIXED CAPITAL FORMATION=C INV FIXED CAPITAL FORMATION\*(N EXS IPD GDP DEFLATOR BASE 1980/100)  
 N INV FIXED CAPITAL FORMATION IN BIL CFA=N INV FIXED CAPITAL FORMATION/1000  
 N INV FIXED PRIVATE SECTOR=N INV FIXED CAPITAL FORMATION-N INV FIXED PUBLIC AND PE  
 N INV FIXED PRIVATE SECTOR IN BIL CFA=N INV FIXED PRIVATE SECTOR/1000  
 N INV FIXED PUBLIC AND PE=C INV PUBLIC AND PARA FIXED INVEST\*(N EXS IPD GDP DEFLATOR BASE 1980/100)  
 N INV FIXED PUBLIC AND PE IN BIL CFA=N INV FIXED PUBLIC AND PE/1000  
 N INV GROSS INVESTMENT=C INV GROSS INVESTMENT\*(N EXS IPD GDP DEFLATOR BASE 1980/100)  
 N INV GROSS INVESTMENT IN BIL CFA=N INV GROSS INVESTMENT/1000  
 N NAT CURRENT DOMESTIC SAVINGS=N GDP GDP CURRENT AT MP-N NAT TOTAL CONSUMPTION  
 N NAT CURRENT OR NATIONAL SAVINGS=N NAT CURRENT DOMESTIC SAVINGS+N BOP NET FACTOR INCOME BIL CFA  
 N NAT CURRENT RESOURCE GAP=N IMP IMPORTS OF GOODS & NFS-N EXS EXPORTS OF GOODS & NFS  
 N NAT GROSS DOMESTIC EXPENDITURES=N NAT TOTAL CONSUMPTION+N INV GROSS INVESTMENT IN BIL CFA  
 N NAT PUBLIC CONSUMPTION=C NAT PUBLIC CONSUMPTION\*(N PRI CONSUMER PRICE INDEX/100)  
 N NAT RESIDUAL PRIVATE CONS=C NAT RESIDUAL PRIVATE CONS\*(N PRI CONSUMER PRICE INDEX/100)  
 N NAT SUPPLY OF RESOURCES=N GDP GDP CURRENT AT MP+N IMP IMPORTS OF GOODS & NFS  
 N NAT TOTAL CONSUMPTION=C NAT TOTAL CONSUMPTION\*(N PRI CONSUMER PRICE INDEX/100)  
 N NAT USE OF RESOURCES=N NAT GROSS DOMESTIC EXPENDITURES+N EXS EXPORTS OF GOODS & NFS  
 N NFS FRET\_INSURANCE CREDIT=+4 @ [1980];PREVIOUS(N NFS FRET\_INSURANCE CREDIT)\*(1+N NFS FRET\_INSURANCE CREDIT GR%)  
 N NFS FRET\_INSURANCE CREDIT GR% = < Yearly data: 1980 - 2000 >  
 N NFS FRET\_INSURANCE DEBIT=+14.5 @ [1980];PREVIOUS(N NFS FRET\_INSURANCE DEBIT)\*(1+N NFS FRET\_INSURANCE DEBIT GR%)  
 N NFS FRET\_INSURANCE DEBIT GR% = < Yearly data: 1980 - 2000 >  
 N NFS GOVT OPERATIONS CREDIT=+2.609 @ [1980];PREVIOUS(N NFS GOVT OPERATIONS CREDIT)\*(1+N NFS GOVT OPERATIONS CREDIT GR%)  
 N NFS GOVT OPERATIONS CREDIT GR% = < Yearly data: 1980 - 2000 >  
 N NFS GOVT OPERATIONS DEBIT=+4 @ [1980];PREVIOUS(N NFS GOVT OPERATIONS DEBIT)\*(1+N NFS GOVT OPERATIONS DEBIT GR%)  
 N NFS GOVT OPERATIONS DEBIT GR% = < Yearly data: 1980 - 2000 >  
 N NFS NON FACTOR SERVICES CREDIT=N NFS OTHER SERVICES CREDIT+N NFS OTHER TRANSPORT CREDIT+N NFS TRAVEL CREDIT+N NFS GOVT OPERATIONS CREDIT+N NFS FRET\_INSU  
 N NFS NON FACTOR SERVICES DEBIT=N NFS OTHER SERVICES DEBIT+N NFS OTHER TRANSPORT DEBIT+N NFS TRAVEL DEBIT+N NFS GOVT OPERATIONS DEBIT+N NFS FRET\_INSURANCE  
 N NFS NON FACTOR SERVICES NET=N NFS NON FACTOR SERVICES CREDIT-N NFS NON FACTOR SERVICES DEBIT  
 N NFS OTHER SERVICES CREDIT=+1.1 @ [1980];PREVIOUS(N NFS OTHER SERVICES CREDIT)\*(1+N NFS OTHER SERVICES CREDIT GR%)  
 N NFS OTHER SERVICES CREDIT GR% = < Yearly data: 1980 - 2000 >  
 N NFS OTHER SERVICES DEBIT=+13.68 @ [1980];PREVIOUS(N NFS OTHER SERVICES DEBIT)\*(1+N NFS OTHER SERVICES DEBIT GR%)  
 N NFS OTHER SERVICES DEBIT GR% = < Yearly data: 1980 - 2000 >  
 N NFS OTHER TRANSPORT CREDIT=+6.52 @ [1980];PREVIOUS(N NFS OTHER TRANSPORT CREDIT)\*(1+N NFS OTHER TRANSPORT CREDIT GR%)  
 N NFS OTHER TRANSPORT CREDIT GR% = < Yearly data: 1980 - 2000 >  
 N NFS OTHER TRANSPORT DEBIT=+4.67 @ [1980];PREVIOUS(N NFS OTHER TRANSPORT DEBIT)\*(1+N NFS OTHER TRANSPORT DEBIT GR%)  
 N NFS OTHER TRANSPORT DEBIT GR% = < Yearly data: 1980 - 2000 >  
 N NFS RATIO MNFS TO MGOODS=N NFS NON FACTOR SERVICES DEBIT/N IMP TOTAL GOODS IMPORTS FOB BIL  
 N NFS RATIO MNFS TO XGOODS=N NFS NON FACTOR SERVICES DEBIT/N EXS GOODS EXPORTS CFA BIL  
 N NFS RATIO XNFS TO MGOODS=N NFS NON FACTOR SERVICES CREDIT/N IMP TOTAL GOODS IMPORTS FOB BIL  
 N NFS RATIO XNFS TO XGOODS=N NFS NON FACTOR SERVICES CREDIT/N EXS GOODS EXPORTS CFA BIL  
 N NFS TRAVEL CREDIT=+2.7 @ [1980];PREVIOUS(N NFS TRAVEL CREDIT)\*(1+N NFS TRAVEL CREDIT GR%)  
 N NFS TRAVEL CREDIT GR% = < Yearly data: 1980 - 2000 >  
 N NFS TRAVEL DEBIT=+1 @ [1980];PREVIOUS(N NFS TRAVEL DEBIT)\*(1+N NFS TRAVEL DEBIT GR%)  
 N NFS TRAVEL DEBIT GR% = < Yearly data: 1980 - 2000 >  
 N NFS USD NON F SERVICE DEBIT=(N NFS NON FACTOR SERVICES DEBIT\*1000)/N EXS AVGE DOLLAR CFAF EXRATE  
 N PRI CONSUMER PRICE INDEX =+100 @ [1980]; PREVIOUS(N PRI CONSUMER PRICE INDEX)\*(1+N PRI CONSUMER PRICE INDEX GR%)  
 N PRI CONSUMER PRICE INDEX GR% = < Yearly data: 1980 - 2000 >  
 N RATIO CURRENT ACCOUNT TO GDP=N BOP CURRENT ACCOUNT EXCL TRANSF/N GDP USD NOMINAL GDP CFA=100  
 N RATIO DEBT SCE OVER CUR GDP=(N FSP TOTAL INTEREST SCHEDULED MLT+N CAP PRINCIPAL MLT)/N GDP GDP CURRENT AT MP=100  
 N RATIO DEBT SCE OVER XGNFS LESS RE\_EXP=N TDS USD TOTAL DEBT SERVICE MLT/(N USD EXPORTS OF GOODS & NFS-N USD VAL MANUF RE\_EXPORTS)\*100  
 N RATIO DEBT SCE OVER XGS LESS RE\_EXP=N TDS USD TOTAL DEBT SERVICE MLT/(N EXS USD EXPORT GOODS & ALL SCES-N USD VAL MANUF RE\_EXPORTS)\*100  
 N RATIO EXPORTS OF GNFS TO GDP=N EXS EXPORTS OF GOODS & NFS/N GDP GDP CURRENT AT MP=100  
 N RATIO IMPORTS OF GNFS TO GDP=N IMP IMPORTS OF GOODS & NFS/N GDP GDP CURRENT AT MP=100

N RES CHANGES IN NFA EXCL IMF = < Yearly data: 1980 - 2000 >  
 N RES RESERVES LEVEL EXCL IMF=-2.82 @ [1980];PREVIOUS(N RES RESERVES LEVEL EXCL IMF)-N RES CHANGES IN NFA EXCL IMF  
 RES USD CHANGES IN NFA EXCL IMF=+N RES CHANGES IN NFA EXCL IMF/N EXS AVGE DOLLAR CFAF EXRATE\*1000  
 RES USD RESERVES LEVEL EXCL IMF=+N RES RESERVES LEVEL EXCL IMF/N EXS END OF PERIOD EXRATE\*100 @ [1980];PREVIOUS(N RES USD RESERVES LEVEL EXCL IMF)-N RES  
 N TDS USD TOTAL DEBT SERVICE MLT=+N FSP USD TOTAL INTEREST MLT+N CAP USD PRINCIPAL MLT  
 N TRS TOTAL CURRENT TRANSFERS = < Yearly data: 1980 - 2000 >  
 N TRS USD TOTAL CURRENT TRANSFERS=+N TRS TOTAL CURRENT TRANSFERS/N EXS AVGE DOLLAR CFAF EXRATE\*1000  
 N USD EXPORTS OF GOODS & NFS=+N USD GOODS EXPORTS MIL+N USD NON FACTOR SERVICES CREDIT  
 N USD GOODS EXPORTS MIL=+N EXS GOODS EXPORTS CFA BIL/N EXS AVGE DOLLAR CFAF EXRATE\*1000  
 N USD NON FACTOR SERVICES CREDIT=+N NFS NON FACTOR SERVICES CREDIT/N EXS AVGE DOLLAR CFAF EXRATE\*1000  
 N USD VAL CEMENT =+N EXS VAL CEMENT /N EXS AVGE DOLLAR CFAF EXRATE\*1000  
 N USD VAL COCOA =+N EXS VAL COCOA /N EXS AVGE DOLLAR CFAF EXRATE\*1000  
 N USD VAL COFFEE =+N EXS VAL COFFEE /N EXS AVGE DOLLAR CFAF EXRATE\*1000  
 N USD VAL COTTON CAKE =+N EXS VAL COTTON CAKE /N EXS AVGE DOLLAR CFAF EXRATE\*1000  
 N USD VAL COTTON GINNED =+N EXS VAL GINNED COTTON /N EXS AVGE DOLLAR CFAF EXRATE\*1000  
 N USD VAL COTTON PRODUCTS =+N EXS VAL COTTON PRODUCTS /N EXS AVGE DOLLAR CFAF EXRATE\*1000  
 N USD VAL COTTON SEED =+N EXS VAL COTTON SEED /N EXS AVGE DOLLAR CFAF EXRATE\*1000  
 N USD VAL CRUDE OIL =+N EXS VAL CRUDE OIL /N EXS AVGE DOLLAR CFAF EXRATE\*1000  
 N USD VAL MANUF RE\_EXPORTS =+N EXS VAL MANUF RE\_EXPORTS /N EXS AVGE DOLLAR CFAF EXRATE\*1000  
 N USD VAL OIL PALM PRODUCTS=+N EXS VAL OIL PALM PRODUCTS/N EXS AVGE DOLLAR CFAF EXRATE\*1000  
 N USD VAL OTHER EXPORTS =+N EXS VAL OTHER EXPORTS /N EXS AVGE DOLLAR CFAF EXRATE\*1000  
 N USD VAL PALM KERNEL CAKE =+N EXS VAL PALM KERNEL CAKE /N EXS AVGE DOLLAR CFAF EXRATE\*1000  
 N USD VAL PALM KERNEL OIL =+N EXS VAL PALM KERNEL OIL /N EXS AVGE DOLLAR CFAF EXRATE\*1000  
 N USD VAL PALM OIL =+N EXS VAL PALM OIL /N EXS AVGE DOLLAR CFAF EXRATE\*1000  
 OIL N EXS VAL INDEX CRUDE =+100 @ [1980]; PREVIOUS(OIL N EXS VAL INDEX CRUDE )\*(1+N EXS VAL CRUDE OIL GRATEX)  
 OIL N EXS VAL INDEX PALM =+100 @ [1980]; PREVIOUS(OIL N EXS VAL INDEX PALM )\*(1+N EXS VAL OIL PALM GRATEX)  
 OIL N EXS VAL INDEX PALM PRODUCTS =+100 @ [1980]; PREVIOUS(OIL N EXS VAL INDEX PALM PRODUCTS)\*(1+N EXS VAL OIL PALM PROD GRATEX)  
 OTHER N EXS PRI INDEX EXPORTS =+100 @ [1980]; PREVIOUS(OTHER N EXS PRI INDEX EXPORTS)\*(1+N EXS PRI OTHER EXPORTS GRATEX)  
 PRODUCTS N EXS PRI INDEX COTTON =+100 @ [1980]; PREVIOUS(PRODUCTS N EXS PRI INDEX COTTON)\*(1+N EXS PRI COTTON PRODUCTS GRATEX)  
 PRODUCTS N EXS VAL INDEX COTTON =+100 @ [1980]; PREVIOUS(PRODUCTS N EXS VAL INDEX COTTON )\*(1+N EXS VAL COTTON PRODUCTS GRATEX)  
 R COEF EXOG GINNING RATIO% = < Yearly data: 1980 - 2000 >  
 R DOM VOL STKS & DOM SALES GINNED COTTON=+R EXS VOL GROSS COTTON PRODUCTION+R COEF EXOG GINNING RATIO%-R EXS VOL GINNED COTTON  
 R EXS COEF CONVERSION FACTOR = < Yearly data: 1980 - 2000 >  
 R EXS VOL CEMENT=+N EXS VAL CEMENT/N EXS PRI CEMENT\*1000  
 R EXS VOL CEMENT GRATEX=PCT(R EXS VOL CEMENT)  
 R EXS VOL COCOA =5.3 @ [1980] ; PREVIOUS(R EXS VOL COCOA )\*(1+R EXS VOL COCOA GRATEX)  
 R EXS VOL COCOA GRATEX = < Yearly data: 1980 - 2000 >  
 R EXS VOL COFFEE =1.36 @ [1980] ; PREVIOUS(R EXS VOL COFFEE )\*(1+R EXS VOL COFFEE GRATEX)  
 R EXS VOL COFFEE GRATEX = < Yearly data: 1980 - 2000 >  
 R EXS VOL COTTON CAKE =3.33 @ [1980] ; PREVIOUS(R EXS VOL COTTON CAKE )\*(1+R EXS VOL COTTON CAKE GRATEX)  
 R EXS VOL COTTON CAKE GRATEX = < Yearly data: 1980 - 2000 >  
 R EXS VOL COTTON PRODUCTS=R EXS VOL GINNED COTTON+R EXS VOL COTTON SEED+R EXS VOL COTTON CAKE  
 R EXS VOL COTTON PRODUCTS GRATEX=PCT(R EXS VOL COTTON PRODUCTS)  
 R EXS VOL COTTON SEED =1.557 @ [1980] ; PREVIOUS(R EXS VOL COTTON SEED )\*(1+R EXS VOL COTTON SEED GRATEX)  
 R EXS VOL COTTON SEED GRATEX = < Yearly data: 1980 - 2000 >  
 R EXS VOL CRUDE OIL GRATEX = < Yearly data: 1980 - 2000 >  
 R EXS VOL CRUDE OIL MIL BARRELS=R PROD VOL CRUDE OIL+R EXS COEF CONVERSION FACTOR/1000  
 R EXS VOL EXPORTS GRATEX=PCT(R EXS VOL EXPORTS THOU TONS)  
 R EXS VOL EXPORTS THOU TONS=+R EXS VOL OIL PALM PRODUCTS+R EXS VOL COTTON PRODUCTS+R EXS VOL COCOA+R EXS VOL COFFEE+R PROD VOL CRUDE OIL+R EXS VOL CEMENT+R  
 R EXS VOL GINNED COTTON =3.828 @ [1980] ; PREVIOUS(R EXS VOL GINNED COTTON )\*(1+R EXS VOL GINNED COTTON GRATEX)  
 R EXS VOL GINNED COTTON GRATEX = < Yearly data: 1980 - 2000 >  
 R EXS VOL GROSS COTTON GRATEX = < Yearly data: 1980 - 2000 >  
 R EXS VOL GROSS COTTON PRODUCTION =16.5 @ [1980] ; PREVIOUS(R EXS VOL GROSS COTTON PRODUCTION )\*(1+R EXS VOL GROSS COTTON GRATEX)  
 R EXS VOL INDEX CEMENT =+100 @ [1980]; PREVIOUS(R EXS VOL INDEX CEMENT )\*(1+R EXS VOL CEMENT GRATEX)  
 R EXS VOL INDEX COCOA =+100 @ [1980]; PREVIOUS(R EXS VOL INDEX COCOA )\*(1+R EXS VOL COCOA GRATEX)  
 R EXS VOL INDEX COFFEE =+100 @ [1980]; PREVIOUS(R EXS VOL INDEX COFFEE )\*(1+R EXS VOL COFFEE GRATEX)  
 R EXS VOL INDEX COTTON CAKE =+100 @ [1980]; PREVIOUS(R EXS VOL INDEX COTTON CAKE )\*(1+R EXS VOL COTTON CAKE GRATEX)  
 R EXS VOL INDEX COTTON PRODUCTS =+100 @ [1980]; PREVIOUS(R EXS VOL INDEX COTTON PRODUCTS )\*(1+R EXS VOL COTTON PRODUCTS GRATEX)  
 R EXS VOL INDEX COTTON SEED =+100 @ [1980]; PREVIOUS(R EXS VOL INDEX COTTON SEED )\*(1+R EXS VOL COTTON SEED GRATEX)  
 R EXS VOL INDEX CRUDE OIL =+100 @ [1980]; PREVIOUS(R EXS VOL INDEX CRUDE OIL )\*(1+R EXS VOL CRUDE OIL GRATEX)

R EXS VOL INDEX GINNED COTTON =+100 @ [1980]; PREVIOUS(R EXS VOL INDEX GINNED COTTON )\*(1+R EXS VOL GINNED COTTON GRATEX)  
R EXS VOL INDEX KERNEL PALM CAKE =+100 @ [1980]; PREVIOUS(R EXS VOL INDEX KERNEL PALM CAKE)\*(1+R EXS VOL PALM KERNEL CAKE GRATEX)  
R EXS VOL INDEX MANUF RE\_EXPORTS =+100 @ [1980]; PREVIOUS(R EXS VOL INDEX MANUF RE\_EXPORTS )\*(1+R EXS VOL MANUF RE\_EXPORTS GRATEX)  
R EXS VOL INDEX OIL PALM KERNEL =+100 @ [1980]; PREVIOUS(R EXS VOL INDEX OIL PALM KERNEL)\*(1+R EXS VOL PALM KERNEL OIL GRATEX)  
R EXS VOL INDEX OIL PALM PRODUCTS =+100 @ [1980]; PREVIOUS(R EXS VOL INDEX OIL PALM PRODUCTS)\*(1+R EXS VOL OIL PALM PROD GRATEX)  
R EXS VOL INDEX OTHER EXPORTS =+100 @ [1980]; PREVIOUS(R EXS VOL INDEX OTHER EXPORTS )\*(1+R EXS VOL OTHER EXPORTS GRATEX)  
R EXS VOL INDEX PALM OIL =+100 @ [1980]; PREVIOUS(R EXS VOL INDEX PALM OIL)\*(1+R EXS VOL PALM OIL GRATEX)  
R EXS VOL INDEX TOTAL GOODS =+100 @ [1980]; PREVIOUS(R EXS VOL INDEX TOTAL GOODS)\*(1+R EXS VOL EXPORTS GRATEX)  
R EXS VOL MANUF RE\_EXPORTS =+N EXS VAL MANUF RE\_EXPORTS/N EXS PRI MANUF RE\_EXPORTS\*1000  
R EXS VOL MANUF RE\_EXPORTS GRATEX =+PCT(R EXS VOL MANUF RE\_EXPORTS)  
R EXS VOL OIL PALM PROD GRATEX =+PCT(R EXS VOL OIL PALM PRODUCTS)  
R EXS VOL OIL PALM PRODUCTS =R EXS VOL PALM OIL +R EXS VOL PALM KERNEL OIL +R EXS VOL PALM KERNEL CAKE  
R EXS VOL OTHER EXPORTS =+N EXS VAL OTHER EXPORTS/N EXS PRI OTHER EXPORTS\*1000  
R EXS VOL OTHER EXPORTS GRATEX =+PCT(R EXS VOL OTHER EXPORTS)  
R EXS VOL PALM KERNEL CAKE =14.2 @ [1980] ; PREVIOUS(R EXS VOL PALM KERNEL CAKE )\*(1+R EXS VOL PALM KERNEL CAKE GRATEX)  
R EXS VOL PALM KERNEL CAKE GRATEX = < Yearly data: 1980 - 2000 >  
R EXS VOL PALM KERNEL OIL =7.5 @ [1980] ; PREVIOUS(R EXS VOL PALM KERNEL OIL )\*(1+R EXS VOL PALM KERNEL OIL GRATEX)  
R EXS VOL PALM KERNEL OIL GRATEX = < Yearly data: 1980 - 2000 >  
R EXS VOL PALM OIL =1.722 @ [1980] ; PREVIOUS(R EXS VOL PALM OIL )\*(1+R EXS VOL PALM OIL GRATEX)  
R EXS VOL PALM OIL GRATEX = < Yearly data: 1980 - 2000 >  
R PROD VOL CRUDE OIL =34.2 @ [1980] ; PREVIOUS(R PROD VOL CRUDE OIL )\*(1+R EXS VOL CRUDE OIL GRATEX)  
R PROD VOL OIL PALM FRUITS GR% = < Yearly data: 1980 - 2000 >  
R PROD VOL OIL PALM FRUITS TH TONS =+343.3 @ [1980]; PREVIOUS(R PROD VOL OIL PALM FRUITS TH TONS)\*(1+R PROD VOL OIL PALM FRUITS GR%)  
RATIO INV CHANGES IN STOCKS = < Yearly data: 1980 - 2000 >  
RATIO RES MONTHS OF ALL IMPORTS =+N RES RESERVES LEVEL EXCL IMF/(N IMP GOODS AND ALL SERVICES/12)  
RE\_EXPORTS N EXS VAL INDEX MANUF =+100 @ [1980]; PREVIOUS(RE\_EXPORTS N EXS VAL INDEX MANUF )\*(1+N EXS VAL MANUF RE\_EXPORTS GRATEX)  
S IND POPULATION GRATEX = < Yearly data: 1980 - 2000 >  
S IND POPULATION IN THOU =+3500 @ [1980]; PREVIOUS(S IND POPULATION IN THOU)\*(1+S IND POPULATION GRATEX)  
S IND PRIVATE CONS PER CAPITA GR% =+PCT(S IND REAL PRIVATE CONS PER CAPITA)  
S IND REAL PRIVATE CONS PER CAPITA =+(C NAT RESIDUAL PRIVATE CONS\*1000)/S IND POPULATION IN THOU  
SEED N EXS PRI INDEX COTTON =+100 @ [1980]; PREVIOUS(SEED N EXS PRI INDEX COTTON)\*(1+N EXS PRI COTTON SEED GRATEX)  
SEED N EXS VAL INDEX COTTON =+100 @ [1980]; PREVIOUS(SEED N EXS VAL INDEX COTTON)\*(1+N EXS VAL COTTON SEED GRATEX)  
TOTAL N EXS VAL INDEX GOODS =+100 @ [1980]; PREVIOUS(TOTAL N EXS VAL INDEX GOODS)\*(1+N EXS GOODS EXPORTS GRATEX)