

VIITH REGIONAL MONETARY STUDIES CONFERENCE

13TH - 15TH OCTOBER, 1975

AN APPROACH TO FLOW OF FUNDS ACCOUNTING IN THE
DEVELOPING ECONOMY OF GUYANA
- A Case For Central Planning -

BANK OF GUYANA

INTRODUCTION

Flow of funds is an analytic method which is based on certain accounting concepts covering an entity's activities in production, investment and financial transactions (i.e. the financing of real activity). The technique is widely used in the management of an enterprise's resources with the objective of employing the shareholder's capital in the most economic manner possible. However, the technique has been applied to national economies which aggregate groups of economic units.

ITS USEFULNESS

The major usefulness of flow of funds accounting lies in its flexibility of application to any set of economic transactions involving flows of funds. Such apparent flexibility would enable the capital account of a given sector in the system of national accounts to extend into the financing of production, consumption and accumulation. Alternatively, the model could indeed be very restrictive, covering only transactions which actually involve the flow of funds.

With respect to the first feature of flow of funds the actual procedures of national economic accounting make this task difficult. Production flows which the national accounts are designed to measure are recorded on an accrual basis. Thus revenue is recognised at the point of sale even though cash has not been received. The set of financing flows for each economic unit are based on their respective cash positions. There is therefore a lag in the adjustment of financing flows to real flows¹⁾

1) We assume here an open economy.

when we attempt to extend a given sector's capital account in a flow of funds framework. Such a lag could affect our calculation of that sector's savings and render it irreconcilable with the national accounts estimate. Moreover, in many instances income flows are estimated values either imputed or based on estimates of the value of production. This introduces errors of measurement which again tend to make the two systems of accounting difficult to reconcile.

The second implication of the flow of funds technique suggest that we attempt to identify those transactions which involve the flow of funds across transactors in the national economy. This imposes certain restrictions on the kind of aggregation we might adopt for the economy. This problem will be dealt with later.

AN INTEGRATED APPROACH TO FLOWS OF FUNDS

As in business financial planning and management it is useful to preserve information about the generation of resources and their use in the system of accounts for the national economy. For a single business unit statements describing the sources and uses of funds (phased out monthly, quarterly etc.) are normally based on physical accounts of production and sales which underly the current and capital account transactions of the enterprise and are denominated in current monetary units.

A note worthy feature of central planning in some national economies is the aim for consistency between the physical accounts of production and the financial accounts of the transactors. In the economy

of Guyana where the public sector is rapidly expanding and where the major economic activities of the traditional private sector are being absorbed into the public sector, it appears that planning would be required in both the physical and the financial sense. Here, the most effective utilisation of the system of flow of funds accounts could be realised if they are made part of an integrated system of accounts as in Table 1.

The table attempts to integrate systematically both the production and financial flows in the national economy. The rationale for this system of recording flows in the economy are the following:

First, in a simple economy where the production base is restricted to a few major commodities (e.g. sugar, rice, bauxite) and a large government (service) sector information on production flows help to illuminate our understanding of the generation financial resources. For some economies information on physical production are not usually considered explicitly in flow of funds models, as is done in the usual type of market segmentation analysis.²⁾ This approach is feasible where price and quantity relationships are determined largely by endogenous factors, as for example, where the market forces of demand and supply operate. In the developing economy of Guyana most prices and quantities are determined by exogenous forces. For example, the price of sugar is fixed largely by non-market forces and the quantity of production and exports depend to a certain degree on the vagaries of the weather and political conditions in the country. Moreover, in the Guyana economy undergoing structural changes in production with attempts being made to (a) diversify the

²⁾ See for example Bain, A.D. "Flow of Fund Analysis: A Survey." The Economic Journal (December, 1973), 1055 - 93, where a number of such studies are reported.

4.

production base, and (b) own and control the major production sectors of the economy, such changes tend to have destabilising effects on behavioural relationships between the real and financial sectors, indeed, if we could identify any. It appears therefore, that it would be useful to analyse production and financial flows as it occurred and in a most realistic manner i.e. less aggregated.

Secondly, an input-output system of recording transactions (Table 1) between economic sectors utilises accounting data from the income statement and balance sheet of enterprises although in this case the emphasis is on the source of inputs and the use of output. In an economy where intersectoral production linkages are not stable and where the appearance of new major economic activities (e.g. those involving huge outlays such as electricity generation or the introduction of a new tax) substantially alter these linkages, the input-output accounting framework and analysis give valuable insights about the impact of major injections or withdrawals of funds into or out of the economic system. Such information could form a useful basis for financial planning in the national economy.

Third, the fact that production flows do not necessarily result in fund flows is recognised explicitly and a multiclassification system of recording flows in the economy is therefore incorporated in Table 1. A reconciliation of income flows (e.g. income appropriated for internal accumulation or income earned from sales) with fund flows may not be practicable unless detailed knowledge of the lags in receipts and expenditures are known for each sector or major economic unit of the economy. For maximum usefulness to the economic decision maker both the national

accounting and the flow of funds accounting systems are included in Table 1. They both record useful but somewhat different kinds of aggregate which may be used for different kinds of economic decisions. In particular, problems concerning income distribution in the economy could better be handled by a combination of information from the national accounting system and some other information base which includes asset distribution and patterns of saving and consumption in its classification scheme.

AGGREGATION OF FLOWS OF FUNDS

The problem of aggregation could be solved by reference to the decision needs of economic policy. If policy is aimed at a very aggregated level (e.g. the annual growth of the G.D.P.) then a corresponding level of aggregation would suffice. In the case where economic policy is oriented along the Keynesian framework, the familiar national accounts aggregation into sectors and sub-sectors may be sufficient. However, in an economy characterised by public sector ownership of major enterprises and where official policy emphasises certain institutions (both financial and non-financial), the national accounts system of aggregation appears limited in its present form. A less aggregative system of organising data of fund flows in an economy with a narrow production base may be more suitable. Such a system would require the separation of all production flows and their financing by the remaining sectors according to:

- A. Productive Enterprises Sector*
- B. Household Financing Sector.

* Goods and Services.

C. Financial Institutions Sector.

D. Foreign Residual Financing Sector.

In such a funds framework the major emphasis is on the mobilisation of financial resources and optimum pattern of financing production activity in the economy. Data organisation for this system would require a detailed listing of all economic units engaged in production of goods and services³⁾ and the separation of such activities of sectors B,C, and D to complete the flow matrix.

For this system both the current and capital accounts of the major production sectors are to be separated out according to:

- (a) Major groups of homogeneous economic activity, or
- (b) Major enterprise with whatever degree of vertical integration present (e.g. sugar which integrates cane planting, sugar cane milling, selling and distribution and by-products)⁴⁾

The current and capital transactions of the other sectors may also be estimated or measured if they exist, for example, the investment in fixed assets by households may be singled for special treatment.

Sectors B,C, and D enables the financing segment of the fund flow, matrix of the production sectors to be identified. The financing flows are

3) See for example a tentative listing in Table II.

4) This approach considers each economic unit or groups of activities as a spatially defined entity i.e. as a centre for growth. It appears that such spatial units could form the **muclaii for local economic** development and policy formation, since there are many areas in Guyana that have not been 'touched' by the familiar Keynesian multiplier.

to be represented by the financial instruments issued by the financial institutions in the domestic economy⁵⁾ or by short term financing flows from the foreign sector. A general accounting framework which may be used to present the data is given in Table III.

PROBLEMS OF APPLICATION

The most fruitful application of flow of funds accounting and analysis could be identified with the more advanced production sectors of the economy where legal requirements constrain enterprises to keep records of economic transactions in a comprehensive manner. As a practical matter it would be useful to identify fund flows in those economic units where they could be measured directly e.g. the central and local governments, public corporations, nationalised industries, co-operatives, private companies registered under the companies act, and financial institutions which are recognised as accounting entities. Indirect forms of measurement will have to be relied on for certain economic units which keep incomplete or no records of their transactions (either current or capital).

The task of building up the needed information is a very important aspect of flow of funds accounting⁶⁾ and require specific

5) A classification of financing flows by type of instrument allows the investigation of balance sheet behaviour of the major institutional sectors. (Productive Enterprises, Households, Financial Institutions and the Foreign Sector) in the market for stocks (or flows) of financial assets, treating the income account variables as exogenous. See, for example, a study by the author, "Some Theoretical And Empirical Results of Commercial Banks Portfolio Behaviour in Guyana, 1965 - 1972". Bank of Guyana. Research Department Seminar Paper (1975).

6) A description of some of the problems of securing flow of funds information is given by G.E. CUMPER "Some Comments on the Problems of Developing a Satisfactory Form of Flow of Funds Analysis for Jamaica", a paper presented to the Sixth Conference of Commonwealth Government Statisticians Nassau, Bahamas, November 27 - December 5th, 1974.

investigations into:

- (a) The extent of reporting by the individual economic units for both internal and external uses.
- (b) The timing of such reports and the possibility of reducing such information to a common year basis, and
- (c) the accessibility of such information.

These three factors would largely determine the combination of direct or indirect methods of measuring the fund flows of economic units. The actual sources of information tapped is determined by the method chosen to measure the flows. Generally, if direct measurements are taken, a form of reporting (along the lines of an income statement and balance sheet) by the individual economic unit will have to be undertaken. Indirect measurements (often cheaper but less comprehensive in coverage) will in general, tap information on financial transactions from the enterprise or sector with which the individual economic unit engages in transactions, for example the financial institutions sector.

CONCLUSION

The object of this exercise has been rather didactic and sought to present the case for an integrated system of recording transactions in a multiclassification framework to satisfy different kinds of decision needs. The recording and analysis should seek consistency not only between current and capital account transactions⁷⁾ but also consistency between real production flows⁸⁾ and fund flows⁹⁾.

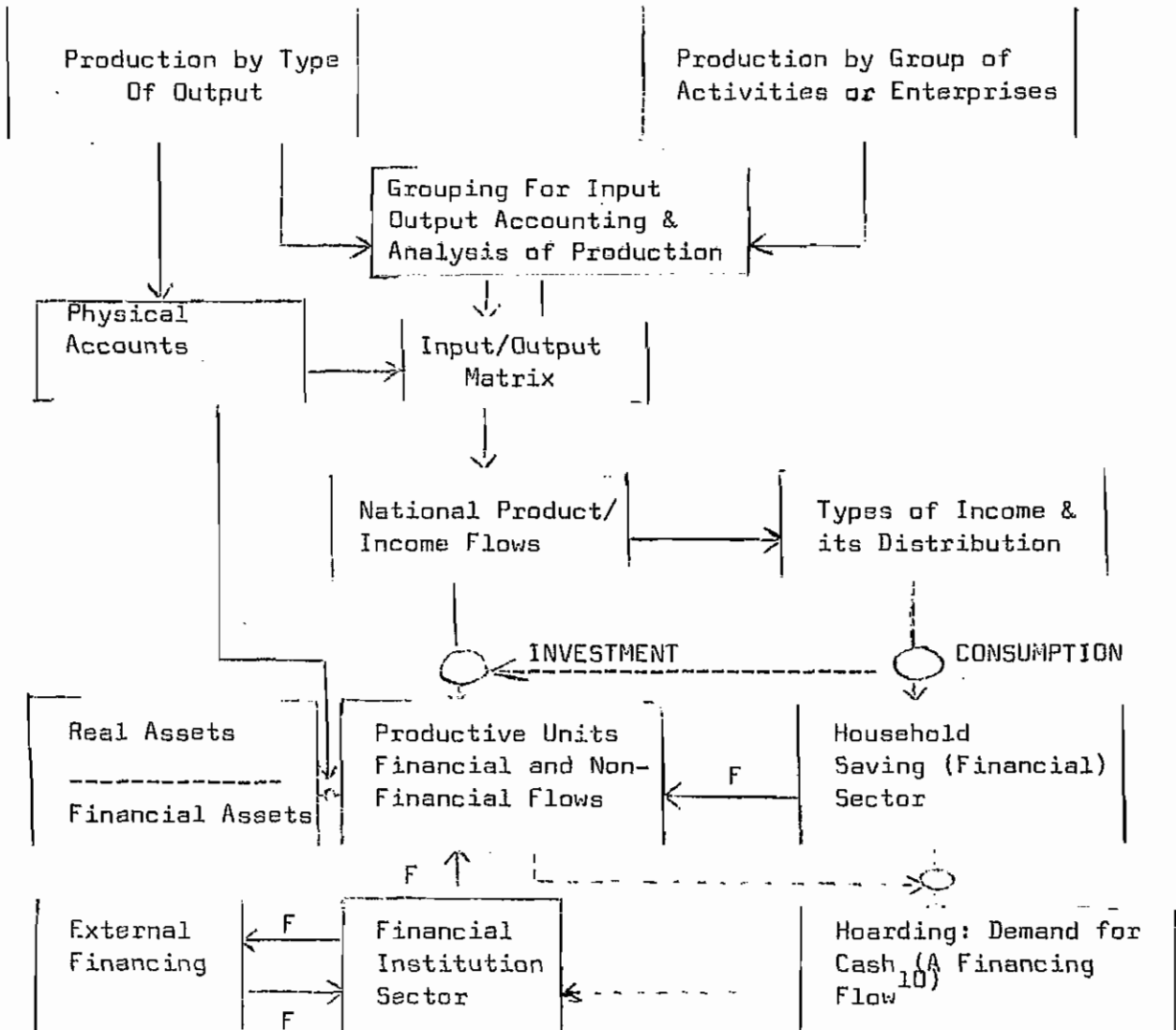
7) Such as would be expected in a comprehensive reporting system.

8) As would be the case where physical production accounts are considered.

9) See for example Fedorenko, N.P. Ed., Economic Development and
 (Moscow, Progress Publishers, 1973). Chapter VII.

These features can be designed to allow a high degree of analysis that could provide the basis for central guidance and stimulation of all financial processes in the economy that will lead to the attainment of various economic and political objectives. These processes could aim at achieving optimum utilisation of financial resources among the producing and consuming units (production enterprises and households) in the national economy. However, the approach is suggestive of a movement away from the simple administrative method of managing resources to more objective and scientific methods of management.

10.
TABLE 1



----- Broken lines indicate ex-ante relationships which are not measured by ex-post accounting relationships and which arise because of certain lagged responses between income flows and cash flows.

F Financing Flows

10) A special kind of Finance Behaviorally Linked.

11.
TABLE II

PRODUCTIVE ENTERPRISES SECTOR¹¹⁾

1. SUGAR
 - (a) State Enterprise
 - (b) Bookers
 - (c) Peasant Farmers

2. RICE
 - (a) Paddy Growing Units
 - (b) Rice Millers
 - (c) Rice Marketing Board

3. OTHER AGRICULTURE
 - (a) State Enterprises
 - (b) Commercial Producers
 - (c) Cooperatives
 - (d) Others

4. MINING AND QUARRYING
 - (a) Bauxite & Alumina - GUYBAU
Bauxite & Alumina - BERMINE
 - (b) Stone & Quarrying Producers
 - (c) Gold and Diamond Producers

5. FOOD BEVERAGES & TOBACCO
 - (a) Pop Producers

5. FOOD BEVERAGES & TOBACCO Cont'd
 - (b) Beer and Rum Manufacturers
 - (c) Tobacco Manufactures
 - (d) Other Manufactures

6. OTHER MANUFACTURING
 - (a) State Enterprises
 - (b) Privately Incorporated Enterprises
 - (c) Cooperatives
 - (d) Others

7. DISTRIBUTION
 - (a) State Enterprise (other than rice, sugar and other agriculture)
 - (b) Private Companies
 - (c) Others

8. TRANSPORT AND COMMUNICATIONS
 - (a) State Enterprises
 - (b) Private Companies
 - (c) Others

9. ENGINEERING & CONSTRUCTION
 - (a) State Enterprises
 - (b) Corporatives
 - (c) Private Companies
 - (d) Others

10. DWELLINGS

- (a) State Property
- (b) Other properties of Quasi Government Enterprises
- (c) Others

11. FINANCIAL SERVICES

- (a) Banks
- (b) Insurance Companies
- (c) Other Financial Entities

12. OTHER SERVICES

- (a) Private Companies
- (b) Cooperatives
- (c) Others

11)

An application of this listing may require regrouping to cope with the problem of vertical integration of some enterprises among the various areas of economic activities (e.g. where an economic unit generates its own electricity or provides its own internal transport or produces and sells the by-products of its main line of productive activity etc.). Further analysis of production income and financial flows may also be looked at from a regional standpoint. This would require the clarification of many conceptual issues underlying regional social accounting.

TABLE III

TRANSACTIONS	Domestic Economy	Productive Enterprises	Households	Financial Institutions	External Sector
A. NON-FINANCIAL TRANSACTIONS					
1. CURRENT ACCOUNT TRANSACTIONS					
Current Receipts					
Sale of Goods or service					
(i) Local					
(ii) Exports					
Sale of real Assets					
Other current Revenue ¹²⁾					
Current Expenditure					
Wages & Salaries					
Profit (gross dividends excluding taxes)					
Interest					
Rent					
Depreciation					
Non Factor Items					
(i) Local					
(ii) Imported					
Other Expenditure					
Current Transfers					
Taxes - Direct					
Taxes - Indirect					
Interest on public Debt					
National Insurance					
Other					
CURRENT SURPLUS DEFICIT					
<u>DEFICIT</u>					

12) Includes Subsidies

TABLE III Cont'd

TRANSACTIONS	Domestic Economy	Productive Enterprises	House- holds	Financial Institu- tions	External Sector
II CAPITAL ACCOUNT TRANSACTIONS					
Capital Receipts					
Capital Transfers ¹³⁾					
Expenditure on fixed assets					
(i) Local					
(ii) Imported					
Change in stocks					
<u>TOTAL FINANCIAL SURPLUS/ DEFICIT</u>					
B. FINANCIAL TRANSACTIONS (IN ALL INSTRUMENTS)					
Cash					
Treasury Bills					
Bank Loans & Advances					
Securities					
Trade Credit					
Commercial Credit					
Capital Issues					
Household Deposits					
Net Foreign Asset Flows					

13) Includes transfers of profits from state enterprises to the Central Government.

BIBLIOGRAPHY

- BAIN, A.D. "Flow of Funds Analysis: A Survey" The Economic Journal (December, 1973), 1055-93.
- CUMPER, G.E. "Some Comments on the Problems of Developing a Satisfactory Form of Flow of Funds Analysis for Jamaica", a paper presented to the Sixth Conference of Commonwealth Government Statisticians, Nassau, Bahamas (November 27 - December 5, 1974).
- FEDORENKO, N.P. Ed. Economic Development and Perspective Planning (Moscow: Progress Publishers, 1973), Chapter VII, 221-247.
- HETH, M. The Flow of Funds in Israel (New York: Praeger Publishers, 1970).
- RAMDAS, G.P. "Some Theoretical and Empirical Results of Commercial Banks Portfolio Behaviour in Guyana, 1965-1972" Bank of Guyana. Research Department Seminar Paper (1975).