

CONSISTENCY OF ACCOUNTING INFORMATION
FOR ECONOMIC PLANNING :
EGYPT AND NORWAY

BY

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Introduction

Socio-economic Development has long become one of the primary goals of modern governments of almost all countries, of which Egypt and Norway are no exception.

To achieve the goals of development, individual countries of variant economies, developed and less developed, have innovated and implemented at least one planning model. Economic planning models are mostly versions of the input-output of leontief. Furthermore, economic planning models depend to a great extent on mathematical and statistical concepts that necessitate numerical data and most importantly accounting information, in order to reflect the economic structural variables of the country. Economic planners are therefore greatly concerned about the following two, interrelated factors which affect stages of planning process and plan outputs :

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The first of two factors deals with quantitative parameters of the economic model, i.e., estimation and degree of significance of the constants " a_i " and coefficients " b_{ij} " of the planning model.

2. The second of two factors is the accuracy and adequacy of data and reliability and consistency of accounting information for estimation of model constants and coefficients.

Data and information are derived from the various economic units of the various sectors of the economy. They are flown-up to the Central Bureaus of Statistics, which are a primary source of information for national planning. They are usually prepared and reported in compliance with stipulated regulations and procedures, and most importantly generally-accepted-accounting-principles (GAAP) and/or standardized or a Uniform Accounting System (UAS). Central Bureaus of Statistics, among other information sources, compile and aggregate data and information according to certain criteria in order to satisfy model-requirements and perceptions of macro-economic planners.

The existence of alternative accounting standards or different rules and computation methods available to economic units assumingly cause the aggregation process of data and information to be inconsistent and non-comparable. Inconsistency of reported data and information will obviously affect adversely estimation of model parameters and thus leads to disclosure of inappropriate reflection of socio-economic policies.

To alleviate this sort of inconsistency, Central Bureaus of Statistics prepare and communicate Explanatory Notes of economic

units in an effect to set-up a sort of standardized criteria of collecting and reporting data and information from micro-economic units of the economy. But these explanatory notes are not enough to avoid inconsistency, for most economic units select their standards from a variety of alternative standards for the purpose of income measurement and asset valuation, the determinants of which are important information source for sectorial and national accounting. This is a situation in practice in a country such as Norway. On the other hand, a Uniform Accounting System is thought of as an appropriate system for consistency of data and accounting information. This has been a system adopted in Egypt since December 1966.

This paper was therefore undertaken to deal with the second factor that has a bearing effect on economic planning. It aims to shadow light on the importance of uniformity and consistency of accounting information for economic planning, the nature and types of data and information content for aggregation, and their format and measurement concepts for reporting. Also, practices in two different environments are presented: (1) Norway, where there is an absent of a Uniform Accounting System (UAS); (2) Egypt where there is a UAS.

To fulfill the purpose of the study, the paper consists of two parts, the first deals with a theoretical framework on economic planning, nature and measurement concepts of accounting information, and sources and format of information; and the second part introduces the two case studies. The paper ends with concluding remarks.

PART ONE

Theoretical Framework: Economic Planning and
Accounting Measurement Concepts and MethodsEconomic Planning and Accounting Information:

Basically the principal objective of economic planning is the growth of national economy and the socio-economic welfare of the people. This objective may be expressed in terms of full-employment, high real-income to households, health security, and social welfare. To express these subobjectives mathematically and in numbers, economic planners establish environmental variables and set-up different policy alternatives for selection and implementation. Environmental variables reflect structural relationships between various economic sectors, on one hand, and their role in enhancing developmental objectives, on the other hand. For so doing, national planners resort to sectorial accounting and national income accounting to obtain the necessary data and information to represent relationships and for purpose of constants and coefficients estimation. Relevant accounting information for economic planning is usually related to income determination and assets. Therefore, a discussion of the income concept and its determinants, as well as reporting practices and computation methods, is worth mentioning.

From the economic point of view, the income concept varies in definition. Irving Fisher (1906, p. 51) considers income as a flow of benefits from wealth through a period of time. J.R. Hicks (1946, p. 172), on the other hand, considers a person's

income is what he can consume during the week and still expect to be as well at the end of the week as he was at the beginning. Recently, Martin J. Baily (1962, p. 3) states that income refers to the total money value of the flow of net incomes of households. Moreover, Wilfred Backerman (1976, p. 287) refers to the method of estimating national product by adding up all the incomes received by the basic factors of production in the form of wages, salaries, and/or profit is called the income method.

In the accounting profession and practice, accountants have long been attempting to comply with the Hicksian concept of income as an applicable measurement. But, since accounting is a purposive and evolutionary discipline and is influenced by the environment within which it operates (May, 1961, p. 3; *J. of Accountancy*, Dec. 1958, p. 63), accounting statements and financial reports are prepared and reported for the interests of different information users and decision-makers, whose information needs vary from group to another. Accountants have failed in formulating a clear and acceptable concept of income determination is true for many reasons that pushed Eldon S. Hendriksen in *Accounting Theory* (1977, p. 139) to state that the income measurement will see its demise in the near future unless drastic changes are made to improve the story it tells.

In spite of the fact that there are considerable conceptual and practical problems in the measurement of income for reporting, several theoretical and practical suggestions were proposed; and can be summarized in technical forms as follows (Hendriksen, 1977, ch. 5):

1. Capital Maintenance Approach to Income Measurement.
2. The Transaction Approach to Income Measurement.
3. The Activities Approach to Income Measurement.

Current professional accounting practice, however, is a combination of all three approaches. Basic characteristics of these approaches seem to be subjective, nevertheless. This subjectivity causes continuity of inconsistencies in financial reporting, especially for comparativity purposes among different economic units, on one hand, and over a period of time for one unit or a number of units, on the other hand. Needless to say that these inconsistencies have a bearing effect on the process of data and information aggregation and analysis for economic planning, modeling, and developmental policies.

In addition to seriousness of preceding approaches and their adoption in accounting reporting relative to consistency, there is also a set of different alternative measurement standards and methods for reporting the determinants of income determination measurement as shown on the paragraphs that follow.

Income determination for an economic unit is measured simply in accounting as a relationship between revenue and expense. This process is referred to in accounting theory as a matching concept, which means, according to Hendriksen (1977, p. 198), "the process of reporting expenses on the basis of a cause-effect relationship with reported revenue." Going further with matching concept, accounting practices measure components of revenue and related expense in accordance with different accounting standards, methods, and procedures available for selection.

Approaches to Income Measurement:

Economists usually criticize accountants for their definition and method determination of income simply because accountants do not include items that contribute to the general growth of enterprise (Kieso and Weygandt, 1980, p. 126). Arguments by both groups can be found in most accounting theory and practice texts (e.g., Hendriksen, 1977, ch. 5; Most, 1977, ch. 7). Generally, a brief exposition of approaches to income measurement is made in this section.

The noted economist, J.R. Hicks (1946, p. 172) definition of income provides the essential elements of measuring individual income. This is done by subtracting beginning net assets (assets minus liabilities) from ending net assets and adjusting for any additional investments during the period. Accountants refer to this procedure or concept as a Capital Maintenance Approach (sometimes referred to as the change-in-equity or wealth approach). This approach takes the net assets or capital values based on some valuation method, such as, historical cost, discounted cash flows, current cost, or fair market value. The USA Internal Revenue Service uses this approach to identify unreported income and refers to its approach as a "net worth check" (Karasyk, 1979, pp. 35-40). The main drawback of this approach is that detailed information concerning the composition of the income is not evident. In other words, necessary numbers of revenue and expense are not presented to the readers and users of the financial statements.

An alternative procedure called Transaction Approach to

Income Measurement focuses on reporting relationships between activities that occurred during a given period instead of presenting net change. The approach involves the recording of changes in asset and liability valuations only as these changes are consequences of both internal and external transactions. Changes in values are excluded if they arise from changes in market valuations or expectations alone. This transaction approach is the more conventional approach used by accountants and is said to be superior to Maintenance Approach for advantages it holds (Hendriksen, 1977, pp. 142-143). The approach is based on the concept of realization at the time of sale or exchange and to the cost convention in accounting. One problem with it involves the determination of the proper format for information disclosure, e.g., single-step or multiple-step income statement.

A third alternative procedure is the Operational or Activities Approach to income measurement which focuses on a description of the activities of an enterprise rather than on the reporting of transactions. In other words, income is assumed to arise when certain activities or events take place rather than only as a result of specific transactions. So, income is recorded during the planning, purchasing, production, and sale processes as well as during the collection process. It is considered as an expansion of the transaction approach since it starts with the transaction as a basis for measurement. The main difference is that the latter is based on the reporting process which measures an external event; while activities approach is based on the real-world concept of activity or event in a broader sense (Hendriksen, 1977, p. 143).

Generally, accountants in their professional practice have different alternatives for income measurement for providing data and accounting information to users and decision-makers. A combination of the three approaches to income measurement is currently practiced.

Rules and Methods of Revenue Measurement:

Revenue items represent one of two determinants of income. There is no generally accepted definition of revenue in accounting literature. There are however two approaches related to revenue measurement; one focuses on inflow of assets resulting from the operational activities of an enterprise; and the second focuses on the production of goods and provision of services and their transfer to consumers or producers. Generally, revenue is considered to be either an inflow of net assets or an outflow of goods and services (Hendriksen, 1977, pp. 176-177). Both approaches are based on the flow concepts, which may be deceptive since the subject-matter of stocks and flows is the same (Most, 1977, p. 270). Therefore, a more traditional definition of revenue represents gross increases in assets or gross decreases in liabilities (or a combination of both) from delivering or producing goods, rendering services or other earning activities of an enterprise during a period (Kieso and Weygandt, 1980, p. 27).

As far as revenue components are recorded and reported, Hendriksen (1977, pp. 179-190) raised certain questions regarding what should be included in revenue; how should revenue be measured, and when should revenue be recognized and when is realized

Time of Reporting	Criteria	Examples
During production.	Establishment of a firm price based on contract or general business terms or existence of market prices at various stages of production.	Accruals; long-term contracts; accretion.
At completion of production.	Existence of a determinable selling price or stable market price. No substantial cost of marketing.	Precious metals; agricultural products; services.
At time of sale.	Established price for the product. Reasonable method for estimating amount collectible. Estimation of all material related expenses.	Most merchandise sales.
At time of cash collection.	Impossible to value assessed with fair degree of accuracy. Additional material expenses are likely, and these cannot be estimated with a fair degree of accuracy at the time of sale.	Installment sales; exchange for fixed asset without verifiably determined value.

Rules and Methods of Expense Measurement:

Most economic units use the accrual basis of accounting, versus the cash basis used by small enterprises and practicing professionals. Generally the allocation of revenue and expenses to the proper period is difficult and ever present in accounting. When the accrual system is used, certain tests or standards aid the accountant in determining the proper method of handling any given item. We previously presented rules and methods for revenue measurement, recognition and realization. In allocating expenses accounting periods, different rules and methods are considered.

The term expenses refers to the costs incurred in the normal operations of business to generate revenues. Expenses, like revenues, represent flows of resources during a period of time, but in the opposite direction. Some expenses, such as cost of goods sold or materials consumed, can be easily assigned or allocated to particular revenues, sales revenues. Other expenses, such as administrative and general expenses, are not easily assigned to product.

Expenses are usually separated into cost of goods sold expense and other operating expenses. The individual measurement and reporting of each item varies greatly. There are two common methods of accounting for inventory and cost of goods sold: periodic and perpetual. With the former, inventory adjustments are made only at year-end when physical counting is made. With the latter a running account of actual flows of inventory is maintained under different methods: FIFO, LIFO, Dollar Value LIFO, Specific Identification, etc. In addition to COGS, adjustments are made to other operating expenses with prepaid and accrued expenses.

Furthermore, cost allocation is subject to different depreciation methods, such as activity method, straight-line, decreasing charge methods, etc., from which an enterprise makes selection.

The implication is therefore that economic units have various options for expense measurement, the result of which income is determined under variant accounting rules and methods. Thus the aggregated production cost becomes non-comparable and inconsistent for economic planning. The main question arises regarding what is an acceptable and reasonable rule and method for measuring and obtaining input items for economic planning. To answer this question, an illustration of data and information requirements for economic planning follows.

Nature and Sources of Data and Information for National Economic Planning:

Regional and National Accounting (Macro-accounting) is considered the principal source of data and information for economic planning. This was emphasized by Beckerman (1976, p. 92) as follows: "accounting is simply a systematic way of classifying the multitude of economic activities that take place in the economy in different groups or classes that are regarded as being important for understanding how the economy work." One should analyze national accounts and find out their sources of information and data input to recognize nature and sources of data and information for economic planning and modeling.

Most economic texts divide National Accounting System (NAS) into five accounts: production, government, household, capital, and

world accounts (Beckerman, 1976, p. 92). A new system of national accounts was introduced by the United Nations in 1968 which divides a nation's system into four major accounts (U.N., 1968, pp. 3-4). Most countries accepted and have adopted the United Nation's new system of national accounts (UNNSNA) for analyzing their economic structures and interrelationship.

The U.N. New System for National Accounts is therefore briefly presented, followed by various sources of data and information for economic planning. The National Accounting System of the U.N. is divided into four major accounts, each of which contains relevant information, as follows (U.N., 1968, pp. 3-4).

First: Domestic Product Account, which contains:

- 1. Sales of Consumption Goods, Sales of Capital Goods, and Sales of Exports, as incoming items.
- 2. Gross Income Payments or Value Added, and Purchase of Imports, as outgoing items.

Second: Income and Outlays Account, which contains:

- 1. Gross Income Receipts from domestic production less provision for consumption of fixed capital, and Net Distributed Factor Income from abroad as incoming items.
- 2. Purchase of Consumption Goods, Saving, and Net Current Transfers Abroad, as outgoing items.

Third: Capital Transaction Account, which contains:

- 1. Saving as Incoming item.
- 2. Purchase of Capital Goods less provisions for consumption of fixed capital, and Net Lending Abroad, as outgoing items.

fourth: Balance of Payments Account for the rest of the world, containing:

1. Sales of Imports, Net Current Transfers, and Net Borrowing, as incoming items.
2. ~~Purchase of Exports and Net Distributed Factor Income Payment~~, as outgoing items.

An examination of preceding accounts' components leads to the following observations:

- Sales value in Domestic Product Account represents first important part in the Income and Outlays Account, Capital Transaction Account, and Balance of Payments Account.
- Gross Income Payments (value added) represents second important part in Income and Outlays Account.
- Purchases of imports in the same preceding account represents third important part in balance of Payments Account.
- Provisions for the consumption of fixed capital (depreciation or cost allocation) which appears as incoming item in Income and Outlays Account with minus sign and as outgoing item, with same sign, in Capital Transaction Account, is considered an outflow data from production sectors.

Since producers of domestic product are those, "industries, producers of government services, producers of non-profit services to household, and domestic services rendered by one household to another," (U.N., 1968, p. 236), the main sources of data and information for national accounting are those industries and

producers which prepare and report data and information in accordance with a unified system akin to governmental accounting. Thus the outflow of data and information of this services sector might be considered consistent in compliance with specific rules, methods and procedures. Other economic units might follow-up different accounting practices which reveal inconsistency as shown before. This inconsistency can be illustrated by introducing some items of national accounting as follows :

1. Prices of sales of consumption, capital, and export goods include some items which do not represent revenues for the economic units such as taxes and/or subsidies. Also, the point of sale recognition differs from unit to another. There are also special types of goods which take more than one year to be completed and sold, such as ships, aeroplanes, and the like, for which percentage-of-completion method might be used. Accordingly, what is the basic point of revenue recognition and realization; and to which period this revenue belongs or reported.

2. Since there are different concepts for reporting expenses, how can economic units be consistent in measuring and reporting Value Added; or how can they avoid inconsistency. Moreover, as economic units are not usually familiar with each other computation methods of interest on borrowed capital, for it is a matter of internal management accounting, their profit becomes a mixture of interest and entrepreneur income.

3. Existence of different cost allocation methods and procedures for depreciation expense estimation, related data and information seem inconsistent and non-comparable.

Problems of inconsistencies as a result of absence of uniformity in accounting reporting of micro-accounting pushed Central Bureaus of Statistics in many countries to introduce suggestions, such as attaching Explanatory Notes with their Questionnaires for collecting data and information from various economic units, as in the case of NORWAY. In other countries, Central Accounting Bureaus and/or other agency impose a Unified Code of concepts and procedures for relevant items measurement and format reporting, as in the case of Egypt. The validity of either means depends greatly on the philosophy of the country. For this reason, in the second part of the paper, an intensive discussion of the measurement concepts and format structure of data and information for economic development in the experiences of two different environments is made. The Experience of Norway is presented first as a case adopts Explanatory Notes technique and there is an absent of a Uniform Accounting System which is adopted in Egypt, the experience of which is then presented. **

* Egypt was chosen for not only its unique standardized accounting system, but also because both writers are Egyptian nationals and exposed to the system academically. Norway was chosen not only because it adopts the Explanatory Notes technique, but also because the first writer had spent his post-doctorate study in Norway and was exposed to their system of information measurement and reporting for economic planning.

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PART TWO

Information Measurement and Reporting in the
Experiences of Norway and Egypt

1. The Norwegian Experiment since 1960s:

A Case of Absence of a "UAS"

Norway is a small country whose economic system is basically market oriented but with a heavy amount of state intervention and control that makes more than 50 percent of the shares of larger corporations. The state's influence on the financial sector is very heavy and the total lending by financial institutions is strictly regulated.

Up to 1960, the Norwegian economic planning was based on government budgeting for allocation and control of resources. Beyond this date, econometric planning techniques have been developed and adopted in the country, especially after a series of aggregated models called MODIS: Model of Disaggregated type (Bjerve, 1976).

Development and Use of MODIS:

The first of the series of MODIS was MODIS I (1961-1965) used in the preparation of five national budgets. In 1965, a new MODIS II was completed and used; followed by MODIS III two years later for use in the period between 1967 and 1973. The presently used model is MODIS IV which has been in use till now.

The econometric models of MODIS necessitate input data

Information. Input data for the Norwegian MODIS are classified in the following groups (Sevaldson, 1971, pp. 10-14):

- Bu independently developed estimates of structural coefficients.
- Su data for the computation of structural coefficients.
- Co accounting data for the variables in the base year.
- Th prognoses for non-policy exogenous variables.
- Bu programs for policy-variables.

an
as An examination of data and information needed for MODIS goals their nature and types as follows:

- se 1. the independent coefficients for marginal propensity to consume out of firstly disposable wage and salary incomes and de secondly of entrepreneurial incomes, were estimated on the basis m National Accounting data in constant prices.
- ac
U 2. elasticities in regard to total consumption for commodity groups were estimated on the basis of National Accounts figures er earlier ten period (1952-1961).
3. the majority of structural coefficients of the model were imated directly on the basis of National Accounts data for the e year that moved from period to antoher.
4. required accounting data for endogenous and exogenous *iables in the base year were taken directly from National coutns. However, detailed specification of indirect taxes and osidies in the base year were taken from statistics of public nance.
5. stocks of each type of fixed capital in each sector at the d of the base year were taken from Capital Accountns and used

together with exogenous investment figures and sectors distribution coefficients for each type of fixed assets to obtain each type of fixed assets in each sector. These data used again as a base for the depreciation estimates.

Obviously input data and information for economic planning in Norway depend mostly on National Accounts, whose preparative and components are based on the information outflows from the micro-accounting at the economic units level, whose outflow of data and information are also embodied in the national accounts prepared by the Central Bureau of Statistics of Norway.

One should therefore need to investigate into the micro-accounting standards and reporting at the economic units levels to find out any consistencies, and then the statistical environment for compiling and aggregating data and information needed for economic planning models.

The Norwegian Micro-accounting Environment:

Before and during WWII, Norwegian accounting system was influenced by the German accounting culture. After WW II, the influence became mainly American, as a result of most academicians spent their sabbatical leaves in the U.S.A. and an increasing number of faculty members attained their doctorates from universities in the U.S.A. (Riise, 1982, p. 105).

Nevertheless, formulation and issuance of accounting standards and financial reporting in Norway are basically legalistic matters. For the important laws determining the financial information requirements are:

the Companies Act, and
the Accounting Act.

These two laws are however affected by the recommendations of two institutions:

The Norwegian Institute of Chartered Accountants which issues recommendations that greatly influence the reporting practice

The Norwegian Standard Association (NSF), a member of the International Organization for Standardization, made recommendations regarding the structure of the accounting system, referred to as the "accounting plan," to facilitate the recording process and retrieval of information for financial reporting.

Although the recommendations of these two institutions are not compulsory, but to a great extent obeyed and regarded semi-official (Riise, 1982, p. 105).

In 1947, the first standard chart of accounts and corresponding accounting plan, as well as a standard accounting terminology were issued. The chart of accounts, partly based on Schmalenbach's chart of accounts and the Swedish M-Chart, included financial and most accounts (see Mueller, 1967, ch. 4; Riise, 1982, p. 106).

In 1970, the accounting plan was revised and the 1970 Standards Committee argued that the basic need was a more uniform basis of information for financial statements and statistics required by the government institutions. But a uniform accounting plan could not be developed, and companies were left to develop their own tailored systems. As a result, the new chart of accounts

was very simple with only four classes specified. In spite of the chart's simplicity, it was structured to facilitate easy retrieval for financial reporting and official statistics.

In 1976, the Norwegian Standards Association established a committee to propose a new standard chart of accounts and accounting plan, as well as revising the standard accounting terminology of 1947 used for accounting educational purposes.

In 1977, a new Companies Act took effect, as did a new Accounting Act in 1978. The latter law covered all companies not specified by the former law, but no difference between both acts concerning information requirements, but partly different in scope. In 1979, a common standard covering the format of the financial statements and the reports for the Central Bureau of Statistics and the tax authorities all embodied in the accounting plan were announced as standards in September 1977. The proposed terminology became standard in February 1979 (Riise, 1982, p. 108).

Annual Reporting Requirements in Norway:

The 1977 and 1978 legislative Acts, some sort of standardization of the accounting reports has been in effect. A Balance Sheet and An Income Statement are requested embodying at least the minimum specifications stipulated by law and to be published with the corresponding figures of preceding year.

For the Balance Sheet, its major structure is as follows:

Assets:

Current Assets
Fixed Assets
Special Items

Liabilities and Equity Capital:

Short-term debt
Long-term Debt
Investment funds and other funds subject
to special tax rules
Equity Capital.

Among specific disclosure requirements are specification of shares in other companies; amount of loans granted to shareholders, directors, and employees; and outstanding accounts with companies of the same group. More specific items required in the balance are shown in detail elsewhere (e.g., Riise, 1982, Appendix 1).

For the Income Statement, the new standard specifies five different income figures, in order to avoid confusion by statement users, as follows:

1. operating income before depreciation,
2. operating income,
3. income including the effect of financial items (before extraordinary),
4. income including extraordinary items, and
5. the year's profit (or loss).

In addition, detailed disclosures of various items are required such as gross revenue, government taxes and fees, received subsidies total amount of raw material and labor as separate items. Other details shown in Riise (1982, Appendix 2); who writes that a total of thirty-seven items are shown separately in the Norwegian standard, plus fifteen subtotals or income figures (Riise, 1982, p. 110)

The legislative act also require additional information from companies with total assets exceeding 10 million Norwegian krone, or with more than 200 employees, or whose share are quoted on the Stock Exchange. The other required information are:

- A: disclose the amount and change in "hidden" reserves in inventories.
- B: give the gross amount of investment in ships, machinery, equipment, and property for each of the last five years.
- C: prepare a funds statement and an interim report at least every half year.

Norwegian Standards for Income Determination and Asset Valuation:

The preceding standards primarily prescribe what items are to be reported and the format of the statements. On the other hand, the valuation and some other rules are explicitly expressed by the mentioned laws.

For valuation of current and fixed assets, the law gives the following rules: (1) current assets shall not be valued higher than actual value and not higher than acquisition cost. Actual value is sales value less sales expenses. (2) fixed assets shall not be valued higher than at acquisition cost. Thus, there is no lower limit of valuation, which implies that accumulation of "hidden reserves" in inventories and fixed assets is acceptable.

The tax laws, on the other hand, sets limits for depreciation policies and inventory valuation. The Companies Act asks for

information on inventories and extraordinary depreciation according to the tax rules. Accordingly, assets are to a great extent valued according to tax rules.

Anyhow, Kinserdal criticism of the Norwegian accounting relevant to terminological confusion, lack of information, unclearness of financial reports, information gap between compaires, effect of tax rules on preparing financial reports (Kinserdal, 1976, pp. 6-7) is to some extent alleviated when the 1976 Standards Committee decided on some general criteria as follows (Riise, 1982, p. 108):

1. The disclosure should enable easy comparison between companies.
2. Fairly disaggregated data with subtotals and totals would enable the users of financial statements to extract the data are deemed necessary.
3. Operational and financial data, as well as ordinary and extraordinary items, were segregated.
4. Tax-conditional "manipulations" should be separately disclosed.
5. At least two years' consecutive data should be included in the same report.

The Statistical Environment and Reporting:

Economic units in Norway are requested by law to flow up any information required by the Central Bureau of Statistics who considers these data and information strictly confidential. Therefore, the Bureau has the authority to collect and aggregate the conventional data for the purpose of economic planning.

Because the CBS had lead steps to establish MODIS, his concept and procedures of data collection and aggregation seem

convenient. One might hence review the CBS concept and procedure or his communication with all economic units, public and/or private and the explanatory notes sent to various economic units in the country.

The CBS of Norway arranged certain forms formulated within the framework of the International Standard Industrial Classification for all economic units (U.N., 1968, pp. 84-85), the system of classification contains five levels allotted the following denominations:

Major Divisions	1-digit code
Divisions	2-digit code
Major Groups	3-digit code
Groups	4-digit code
Subgroups	5-digit code

Forms are divided into several sections which differ in contents one from another. However, the first 9 sections of these forms are standardized for all divisions. The 9 sections are concerned with the following data and information:

The first section is devoted to make a survey about average number of employment, employees other than production workers, production workers on the payroll of the last pay day of certain months, part time employees, and manhours worked during the year.

The second section is devoted to exhibit total wages and salaries payable to the above employees, including value of free boards, holiday allowances and wages paid during sick leave, etc.

The third section deals with social expenses, which include:

- : legally required expenditures
- : Voluntary expenditures and expenditures according to collective bargaining.
- : Total social expenses.

The fourth section includes detailed data on consumption of goods and services, "inputs" of purchases from other units in the economy or imported directly from abroad by the unit itself.

The fifth section contains detailed data on the outputs of goods and services exclusive of VAT "value added taxes."

The sixth section is devoted to the following:

- a: inventories of raw materials, fuel, containers and packing materials, and inputs of own-account construction works. All these items are valued at purchase prices.
- b: inventories of finished products valued at sales prices.

The seventh section is for all types of indirect taxes to government.

The eighth section is devoted to subsidies from the state to the economic unit.

The ninth section includes capital expenditure on all types of fixed assets.

The remaining sections exhibit in details certain items according to the nature of every division.

As far as the accompanying Explanatory Notes are concerned, they explain in details how the economic units will prepare data required for each form. They also include some expressions which seem to be loosable or phrases of subjective bases of measurement, such as:

"please give the best estimate.."

"expected sales value.."

"judgment may be used for ..."

These expressions reflect subjectivity that leads to possible inaccuracy of data, and might, therefore, cause inconsistency for comparative and aggregation purposes.

II. The Egyptian Experiment since 1960s :

A Case of Existence of a "UAS"

Prior to the issuance of the Egyptian Standardized or Uniform Accounting System (EUSA), the accounting profession and practice in the country witnessed a series of laws and decrees that affected directly or indirectly financial accounting of various economic units. The important regulations are as follows (CAO, 1967, p. 2):

1. the High Decree promulgating the Commerce Act on Nov. 13, 1883.
2. the Taxation Act No. 14 for 1939.
3. Act No. 388 for 1953 "Commercial Books", amended by Act No. 58 for 1954.
4. Act No. 26 for 1954 "Certain Rules for Joint Stock Companies and Limited Liability Companies."

The nationalization of the Suez Canal in 1956 commenced a series of presidential laws and decrees, especially Laws 117, 118 and 119 for 1961, that Egyptianized most of the country's industry, whole banking and insurance companies, as well as cotton trade and construction, transportation and trading sectors. A later decree, Law No. 132 of 1961, was issued to establish supervisory authorities (General Organizations) over nationalized activities. In mid-1970s, General Organizations were replaced by specialized Higher Councils. One can refer to economic texts on Egypt for detailed account.

It was not also until 1957 that economic planning on a broad scale in the country was introduced. A ten-year plan was drawn-up and to be executed in two five-year phases commenced July 1, 1960. Every five-year plan was subdivided into annual plans. Since then, central national planning in the country, with annual budgeting, has been in practice.

As a result, the country's private enterprise system with foreign influence in many fields was transformed into a socialist, planned, and cooperative system between mid-1950s to late 1960s. By early 1970s, an Open-Door economic system is officially designated in the country. However, a large portion of the country's socio-economic activities is owned and operated by the country's public sector enterprises. For this reason, and for economic planning purposes, a uniform accounting system was introduced and adopted as presented in the following sections.

Objectives of the EUAS:

The introduction of economic planning in Egypt required p formulation, implementation and follow-up. These stages necessi tated availability of data and reliable accounting information on the micro-sectorial, and macro-levels of the economy. The Egyp government had therefore realized, since 1961 nationalization dec ees, that to obtain the required information for purposes of plan ing, control and evaluation, as well as for consistency reasons an aggregation, a uniform accounting system of accounts, rules and procedures should be adopted.

In December 1966, the Egyptian Central Accounting Admini tration (CAA) issued a Uniform System of Accounts to be used b all economic units of public ownership or public supervision comm encing with the fiscal year July 1, 1967 - June 30, 1968, with the exception of banks and insurance companies due to the difference in the nature of their activities and objectives (for detailed accou CAA. The Uniform Accounting System, 1966, in Arabic; and CAO A Note on The Standardized Accounting System in the UAR, Oc. 1967, in English). Since then many accounting textbooks described the system and many doctoral and master theses were undertaken on this subject-matter (e.g., Marie , Michigan State University, 1969; Sharkas, University of Missouri-Columbia, 1972).

Egypt's Uniform Accounting System is organized in three volumes. The first volume contains principal features of the system and is divided into two parts: the first deals with the objectives of the system, methodology used in its preparation, and the areas of economic activities subject to its applicability. The

and part is in four chapters, the first deals with uniform chart accounts to be followed; the second deals with principles, rules, procedures, terminology, and definitions to be applied; the third describes the number, type and format of financial statements and supporting tables; and the fourth chapter describes physical, financial and cash budgeting reports, and the rules to be followed their preparation and the formats to be used.

The second volume contains five appendices. The first contains depreciation rates. The second provides the principles and rules to be followed in exercising financial control. The third deals with properties and definitions of periodic and analytical information concerning production capacities, quantity and quality of output, employment, commodity input requirements, various financial ratios and efficiency indices, and other information required to be provided by the economic unit to higher administrative and economic organs. The fourth prescribes and describes the special purpose records to be kept by economic units. The fifth appendix contains documents concerning the preparation, authorization, and issuance of the EUAS.

The third volume describes three standardized methods for classifying economic activities along with appropriate numbering systems: by type of industry, by kind of commodity, and by nature of occupation.

The objectives of the EUAS as stated in the system (CAA, 1966, Vol. I, pp. 8-11) can be summarized as follows:

1. to provide the basic and necessary information and analytical

tools and methods for planning, execution of plans, coordinatic and control at all levels specified by the system as: the enter prise level, the General Organization level, and the level of other organizations, such as Ministry of Planning, Ministry of Finance, Ministry of Economics, Banking system, Central Accc ting Administration, and Central Statistical and Public Mobiliz tion Administration.

2. To provide a link between the accounts of the individual econ units and the social (national income) accounts. This coordina facilitates the preparation of "gross national income accounts and other statistical data used in planning the economy and i controlling its direction.

3. To facilitate the tabulation and storage of accounting inform. This enables the economic units to supply the information ne by the planning and other authorities in a uniform format an terms of uniform treatment.

It is obvious that the prime source of accounting data an information is the enterprise level. This information, together v the objectives of the EUAS, fit to aid in the efficient making c allocative and operative decisions dealing with economic resourc at various levels of the economy, effective administration and c trol of the national economic activities.

The EUAS Chart of Accounts:

A uniform chart of accounts is a classification device wh is a prerequisite for any uniformity plan (Sharkas, 1972, p. 87). Three types of code or index used in classification are practice

alphabetically, numerical and alpha-numerical. And a uniform classification of accounts can be applied on the sectorial level as in case of Sweden or on the national level as in the case of Germany, France and Egypt (Sharkas, 1972, pp. 87-88).

For Egypt's Uniform Chart of Accounts, it is divided into four main classes of accounts which emphasize both functional and natural classification of expenses. These four classes are: assets, equities, uses of resources, and sources. The first two classes constitute the balance sheet; and the second two classes constitute the operating and result account. The System (1966, pp. 24-25) illustrated the contents of each class in some detail.

The EUAS is considered a comprehensive uniformity plan. That is, the system is not merely a uniform chart of accounts to identify an account class or subclasses, i.e., a mere classification device, nor is it a uniform plan of accounting which stipulates, in addition to a uniform chart of accounts, rules and procedures for classification, summarization and reporting of accounting transactions, but allows flexibility in treating few transactions. It is comprehensive in the sense that it means a uniform plan of accounts, adoption of uniform rules and procedures for summarization and reporting, and imposition of stipulated standards of uniform accounting rules, methods, procedures and concepts of income determination and asset valuation, with no flexibility (Sharkas, 1972, pp. 91-92).

Accordingly, the EUAS requires every economic unit to prepare at a predetermined date six end-of-the-period financial statements as follows (CAO, 1967, p. 20):

1. a balance sheet;
2. a Statement of Sources & Uses of Funds;
3. Current Operations Account;
4. Production & Trading Account;
5. Profit & Loss Account; and,
6. Cash Statement.

Besides their traditional purposes, the preceding statement and accounts are necessary for purpose of planning and control. They must be prepared in accordance with the pre-determined dates and the principles, concepts, terms, definitions and depreciation rates specified in the EUAS. A full description of each statement or account contents is fully described and attached to the System volumes and well analyzed and examined in many accounting textbooks, research papers and theses. For the reason of space, one can refer to a reference on this subject for a detailed account. The focus hereafter will be on briefing main topics.

Egypt's Uniformity of Accounting Standards:

After the system standardized the accounts, the EUAS proceeded to the standardization of accounting principles, rules, methods, terms, and definitions, which are the backbone of an uniform and essential requirement for consistency of data and information for aggregation.

Standard valuation principles have been pointed out in regard to the valuation of land, maintenance expenses, movements of inventory of construction inputs, finished production, unfinished production and work in progress.

and debtors balances. Certain standards are also indicated in the system in regard to depreciation bases for valuation of depreciable assets, application of depreciation rates, accounting for the difference between book value and replacement cost, treatment of written-off capital assets which are idle during the whole accounting period, depreciation of tools, and so on.

The historical cost principle is required for valuation. If the historical cost is expired by depreciation and the asset remains in use, its value becomes zero on balance sheet. The system distinguished between assets ready for operation and those under construction. Land, regardless of its purpose, organization costs, expenses incurred prior to operations, research costs, and costs of technical documents are all treated as fixed assets.

The usual three-way classification of inventories into materials and supplies, work in process, and finished product is made in the system and one method of valuation is recommended for each class. Commodity materials consumed during the period and remaining at its end are valued in accordance with the moving-average method which is the average acquisition value after last addition:

$$\frac{\text{(Value of inventory balance + value of addition)}}{\text{(quantity of inventory balance + quantity of addition)}}$$

All materials are valued by the preceding rule except salvage which should be valued by average-selling prices of the previous year.

Unfinished goods or WIP is valued at a mixed method of costing. They are valued by full production costs (absorption

costing) of the production stage immediate to their current stage of production plus direct materials and direct labor of the current stage (some sort of direct costing).

The rule furnished by the system for finished goods valuation is full production which includes cost of production centers and cost of production service centers. But its cost so computed was found to be higher than selling price, a provision for the difference should be made.

Under the equity section, a new capital account is instituted to represent the capital contributions repayable to government. Long-term debt is comprised of two accounts: one for long-term foreign debt and the other for long-term national debt. Both accounts replaced the bond accounts.

The only depreciation method allowed under the EUAS is straightline method used by all economic units regardless of their nature. The only discrimination between various types of assets is in the straight line rates of depreciation that should be applied after being given. That is, within each group of fixed assets different rates can be applied for the same asset in different industries.

The main purpose of the detailed classification of balance sheet is to facilitate the process of aggregation needed for social accounting categories and other aggregation purposes.

The current Operations Statement is intended to serve as a link between micro-accounting and social accounting and is similar

to the income and product statement in social accounting. The only difference is that the latter excludes intermediate products, i.e., includes only amounts of value added.

The production and trading account represents the results of production and trading activities. It is based on the rules of conventional accounting. Expenses are classified according to their nature and cost centers. The natural classification of expenses is subclassified into four classes: wages, commodity inputs, service inputs, and current transfer expenses. The cost center classification of expense is subclassified into three classes: production cost centers, production service center, and marketing cost center.

The profit and loss includes the other expenses and revenues not included in the production and trading account; and is divided into two sections: the first to determine the current surplus [or deficit] and the second to show the distribution of the current surplus, if any, between the appropriated provisions and other items of distributed earnings. Expenses are classified as administrative and financing services, and current transfer appropriations. Revenue included are classified as transfer revenues, miscellaneous revenues and revenues from investment in government securities. The matching process results in a surplus [or deficit] which is reduced by income taxes, in case of surplus, to determine surplus available for distribution.

Other Financial and Data Reporting:

Egypt's economic units are not limited to report only the

preceding financial statements. The EUAS requires also the preparation and reporting as well another set of standard reports in a specific form designated to serve both planning and control mechanisms. These forms are briefly:

- 1: capacity and production forms;
- 2: operating forms;
- 3: employment and wages forms;
- 4: financial forms.

In total, the number of reports required to be prepared and communicated by economic units inclusive financial statements is 26 (Marie, 1969, p. 241).

Macro-Accounting in Egypt:

The term macro-accounting is also referred to as social accounting, socio-economic accounting, national accounting, economic accounting, etc. It has long become, together with national income statistics, a government task, usually undertaken by economists, which depends to a great extent on micro-accounting reporting.

Descriptive economic indicators needed for economic planning, modeling, and control are associated with macro-accounting framework. These terms are gross national product, net national product, net national income at factor cost, personal income, and disposable income.

The first attempt to formulate a comprehensive set of national income accounts in Egypt took place in 1955 by the Technical

Planning Administration. This attempt resulted in a series of social accounting statistics starting by the year 1953. Since then the construction of social accounts system became a part of the activities of TPA (Marie, 1969, pp. 277-278; Sharkas, 1972, 122).

There is significant typing link between social accounting in Egypt and microaccounting for the purpose of economic planning and control.

The framework of the Egyptian social accounting is built on a three-way classification system for grouping the country's economic transactions (Marie, 1969, pp. 279-292; Sharkas, 1972, pp. 123-127):

Macro-Accounting in Egypt:

1. **The Functional Basis of Classification.**
 transactions are grouped according to sector of origin as follows:
 - a: Business Sector: public, private, and government
 - b: Household Sector
 - c: General Government Sector
 - d: rest of the World Account (foreign sector).
2. **Natural Classification.**
 transactions are grouped according to their nature as follows:
 - a: commodity transactions, involving commodities and services produced.
 - b: income and transfer transactions, dealing with payments to factors of production, taxes, subsidies, and other transfers. lending and borrowing transactions.
3. **Economic Activities-base of Classification.**
 - a: transactions dealing with productive activities, recorded in the production account.

- b: transactions dealing with consumption activities, recorded in the appropriation account.
- c: transactions dealing with investment activities, recorded in the capital account.

The first classification defines the social accounting entities; the second and third classifications determine the number of accounts and the amount of detail involved. These national accounts are:

1. revenue and expenditure account, for the economy, business sector, household sector, and government sector.
2. production account, for business sector.
3. appropriation account, for business, household, and government sectors.
4. capital account, for business, household, and government sector.
5. export and import account for the rest of the world account.
6. domestic production at market prices and domestic income at factor cost, for the economy.

Egypt's Corporation Laws:

In Egypt, there exist an increasing number of stockholding corporations of public and private ownership. Since Law No. 26 of 1954 regulated corporations in the Egyptian economy, Law No. 32 of 1966 was issued to expound organizational bases for the public sector enterprises which are not subject of Law No. 26 of 1954.

As a result of the country's new open door economic policy and the encouragement of foreign investments, Law No. 32 of 1966 was superseded and replaced by Law No. 60 of 1971 which was also amended by Law No. 5 of 1974. Furthermore, Law No. 26

1954 was superseded and replaced by Law No. 159 of 1981 which regulates stockholding and limited corporations. by investigate the last law, we can say that it follow to a certain extent the steps of the EUAS Farmat and standards.

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Private Corporation Law
In Egypt, there is an increasing number of stockholding corporations of public and private ownership. The law states that the Egyptian economic system is based on the state and private ownership. In 1988, the law was amended to expand organizations which are not subject of law No. 159 of 1981. The result of the country's new legal system is the encouragement of foreign investment. The law is a result of the one management of the country's economic system and the expansion of the private sector. The law is a result of the one management of the country's economic system and the expansion of the private sector.

CONCLUDING REMARKS

The doctrine of consistency has been a basic tenet in accounting for many years. It has been used in textbooks and elsewhere to refer to the use of the same accounting rules and procedures by an accounting entity from period to period. It is useful for comparing performance of one year with preceding or and useful for prediction purposes. But comparison between economic units becomes difficult, for availability of a number of alternative practices before them with respect to inventory pricing, depreciation policies, and expensing versus capitalizing. Switching from one alternative to another causes inconsistencies.

For economic planning, inconsistency becomes a bottleneck. Existence of variant accounting practices affect in an adverse manner the aggregation process of data and information derived from economic units for estimation of model's parameters. Uniformity among firms in their financial reporting and statistical data is frequently thought to represent a desirable goal for national economic planning. That is, the goal of uniformity frequently implies the presentation of data and accounting information by economic units using the same accounting procedures, measurement concepts, classifications and methods of disclosure, as well as a similar basic format in the reporting formats. The objective is proper aggregation and economic planning, as well as accuracy prediction of model constants and coefficients.

This paper was therefore undertaken to exhibit the nature and type of data and information required for economic planning

showed various approaches to income measurement and asset valuation. Furthermore, a variety of accounting practices is shown, reflecting inconsistencies and ununiformity. The paper then introduced two case studies, one has no strict uniform accounting system (Norway) where economic units have different options of valuation methods; and the second adopts a strict uniform accounting system (Egypt) where economic units have been subject to stipulated accounting rules and procedures.

Three patterns of uniformity were presented (Mueller, 1967, ch. 4): (1) a uniform chart of accounts; (2) a uniform plan of accounting; and (3) a comprehensive uniformity in accounting.

In Norway, the first two patterns are adopted; and Explanatory Notes are given to economic units by the Central Bureau of Statistics. In Egypt, a comprehensive system of uniformity has been adopted since 1967. But economic units in Norway are subject to legislative laws, Companies Law and Accounting Law, in their annual reporting requirements. But firms might possibly deviate from the standards if this is done according to "good accounting practice," as recommended by the Institute of Chartered Accountants in Norway. Therefore, economic units follow up the standardized chart of accounts and the accounting plan stipulated by law, but they are not in consistency with accounting rules and methods. In Egypt, on the other hand, its UAS serves and satisfies information requirements of various administrative levels of the economy, even though criticized for being inadequate. It should be recommended however that further studies in respect of consistency and uniformity in micro-accounting are needed.

REFERENCES

- Baily, Martin J. *National Income and the Price Level; a study of macro theory*. New York: McGraw-Hill, 1962.
- Beckerman, Wilfred. *An Introduction to National Income Analysis* 2nd Ed. London: Weidenfeld and Nicolson, 1967.
- Bjerve, Petter Jakob. "Trends in Norwegian Planning, 1945-1975." *Artikler Fra Statistisk Sentralbyra*, No. 84, Oslo, 1976.
- Central Accounting Administration. *The Uniform Accounting System*. Cairo: Elbalagk Press, Dec. 1966. In Arabic.
- Central Auditing Organization. *A Note on the Standardized Accounting System in the UAR*. Cairo, 1967.
- Fisher, Irving. *The Nature of Capital and Income*. New York: A.M. Kelly, 1965, original edition, 1906.
- Hendriksen, Eldon S. *Accounting Theory*. 3rd Ed. Homewood, Ill. Richard D. Irwin, Inc., 1977.
- Hicks, J.R. *Value and Capital*. Oxford: Clarendon Press, 1946.
- Karasyk, Joseph. "The Net Worth Method in Tax Evasion Cases." *The CPA Journal*, Vol. XLIX, No. 4 (April 1979), 35-40.
- Kieso, Donald E.; and Weygandt, Jerry J. *Intermediate Accounting*. 3rd Ed. New York: John Wiley & Sons, Inc., 1980.
- Kinserdal, Arne. "Financial Reporting in Norway." Unpublished paper, NHH, Oslo, 1976.
- Marie, Abd-Elhay A. *A Critical Study of Asset Valuation and Income Determination Under the Uniform UAR (Egypt) Accounting*

- System Relative to the Objectives of Economic Planning. Unpublished Ph.D. dissertation, Michigan State University, 1969.
- Ray, George O. Financial Accounting: A Distillation of Experience. New York: The Macmillan Co., 1961.
- Host, Kenneth S. Accounting Theory, Ohio: Grid Inc., 1977.
- Mueller, Gerhard G. International Accounting. New York: The Macmillan Co., 1967.
- Report to Council of the Special Committee on Research Program." Journal of Accountancy, Vol. CVI (December 1958).
- Riise, Arne. "Norwegian Standards for Annual Reporting Requirements and Chart of Accounts." The International Journal of Accounting Education and Research, Vol. 17, No. 2 (Spring 1982), 103-120.
- Sevaldson, Per. "Data Sources and User Operations of MODIS; A Macroeconomic Model for Short-Term Planning." Artikler Fra Statistisk Sentralbyra, No. 41, Oslo 1971.
- Sharkas, M. Wagdy Kamel. The Adequacy of the Accounting System in Egypt Relative to the Environmental Characteristics. Unpublished Ph.D. dissertation, University of Missouri - Columbia, 1972.
- United Nations. A System of National Accounts. Studies in Methods Series F. No. 2 (Revision 3). New York: The United Nations Publications. 1968.

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