

Accountancy for Economic Development

In an article in the last issue of Finance and Development Adolf J.H. Enthoven showed how accountancy has through its history continuously responded to new needs. In this article he indicates how he believes it should now respond to the requirements of the developing countries.

Adolf J.H. Enthoven

THE dynamic process of developing the less developed countries poses a new demand for an effective and comprehensive methodology and practice of accountancy for both microeconomic and macroeconomic purposes. An improved form of accountancy that will serve the economic development process in the most effective and useful manner must be sought. If, then, we are to create, as I believe we should, an “economic development accountancy” the important questions that we shall have to answer are what type and form of information do we need for this new kind of accountancy and what methodology is required to attain it?

Let me offer some indications of what is involved. In the first place the information to be generated needs to be economically meaningful and useful, reflecting socioeconomic relationships, and geared toward the

objectives of development. The standards on which the information is evolved must be part of an eco-accountancy “philosophy” or theory. Such a theory, to be economically oriented, would constitute a coherent set of standards and guidelines, forming a reference framework. The purpose of the framework is to judge the applicability of the accountancy methodology, and it should accordingly encompass more than the accepted practices and conventions. Second, the information and evaluations should reflect not only the “hard” information that we have about past events but also the information (clearly less hard) that estimates provide about the future. Accountants have historically been obsessed with the question: is this information accurate and verifiable? In economic development accountancy they must accept that even information that only approximates to accuracy may be useful.

Finally, the information should be valued and portrayed in such a form that it benefits the principal users; it will have to serve both the microeconomic and macroeconomic sphere. Adherence to a standardized system or plan of accountancy would be of the greatest value in this connection.

Accountancy—in its widest context—may be considered as consisting of four kinds of activity, pertaining to the eco-financial information to be provided: (1) identifying, analyzing, processing, classifying, allocating, and reporting; (2) measurement, evaluation, communication, and the assessment of efficiency; (3) decision making about human and material resources; (4) accountability and the facilitating of controls. These activities have applicability to the four branches of accountancy, i.e., financial accountancy and auditing; cost and management accountancy; government accountancy and budgeting; and social (national) accounting.

Collecting Information

In order to shape such a new form of accountancy, certain technical aspects have to be considered. I have already stressed that the information should be classified, portrayed, and reported in a more universally standardized manner. We often find, for example, that similar capital or operating items (or expenses) are treated differently in different projects or different countries; and different allocations, amortizations of and valuations (historical vs. current) of capital and expense items may give a distorted account of income, surplus, and aggregate result. These distortions in turn may lead to different planning coefficients, such as shadow prices, input-output relations, and capital output ratios. For purposes of reporting, measurement, and microeconomic and macroeconomic decision making, such diversity of presentation and related evaluation is undesirable and detrimental.

The adoption of a uniform or standardized system of accountancy could alleviate many basic accountancy problems in developing economies, where generally we are in any event faced with a lack of information and adequate accountancy skills. Such a uniform accountancy system or plan would be widely useful; it would serve the business unit, the industry, the social accounts, the development plan and its related economic policies, the government budget, and the fiscal system. The uniformity would above all apply to concepts and terms, the procedures of valuation (inputs and outputs), the method of registration, and the classification of accounts for business, sectoral, and even national purposes. The advantages of such a standardized eco-accountancy system would be easier analysis, evaluation, and comparability; better studies of feasibility and costs; facilitation of fiscal administration, budgeting, control,

and auditing; more reliable social accounts; a more unified development of accountancy theory; and improvement in economic planning and policies. International acceptance of such a “uniform accountancy system” would be desirable, as it would facilitate measurement and comparison by countries and expedite capital formation and investment flows.

A great deal of valuable work in standardizing social accounting systems has been carried out by the United Nations, the Organization for Economic Cooperation and Development, and the International Monetary Fund, and the development of a uniform accountancy system will have to be closely coordinated and integrated with these preparations.

For information to be effective for decision making, future cost and benefits have to be measured, incorporating, where possible, economic and technological trends. Comparisons between industries equally require that the information is assessed and allocated on a basis that is economically justifiable. Too often we find that the accountancy rules set forth ways of, for example, allocating expenses, costs, and revenues that are directed exclusively to the requirement of “accounting and stewardship” in a narrow sense.

Long-term development planning and investment requires calculations about future direct and indirect benefits and costs, to determine the most beneficial social or private-financial course of action to follow. Such cost-benefit analysis applies to tactical decisions concerning an enterprise, a project and its components, the comparison between projects, and to development programs. It is an aid for the implementation of a development plan, and its purpose is to quantify—and presumably optimize—the difference between revenues and costs. Such cost-benefit measurements have to be more extensive than an extrapolation of past financial trends, which could lead to the wrong decision-making “model”; it requires a certain economic insight into future behaviors of cost and prices. These factors are influenced by socioeconomic conditions and technological changes and by institutional, organizational, infrastructure, and manpower variations.

Both capital and operating costs and benefits tend to change over time, and this time-value factor is of great importance in the accountancy cost-benefit (and cost-effectiveness) calculations. Time has an economic value, and it is necessary in cost-benefit analysis to compare the benefits and costs, taking into account the interest rate, or discount factor, on future revenues and costs. The costs are generally easier to calculate than the future (discounted) benefits. The interest (discount) rate used—or return obtained—in cost-benefit analysis is a measure of the (marginal) productivity of capital in the economy, and helps to determine whether a project is worthwhile. Such analyses assist in eliminating uneconomic projects and in channeling investments in the

most beneficial direction. The projected benefits of a project or program are generally realized over a long period of time, while most of the costs are incurred in the beginning. Relative financial weights have to be placed on revenues and costs, and the weighted sum maximized. Such discounting of benefits and costs, over time, is referred to as the discounted value or discounted cash flow method.¹ The rate of interest—or return required—is a determinant in the feasibility and optimization of a project or program.

It cannot be stressed too strongly that what is really vital to accountancy for economic development is that the accountant, in preparing feasibility studies and other forecasts, has to measure and communicate information about the future. This calls for a greater eco-technical insight and coordination with other disciplines than is found at present. From an auditing point of view it also involves the concept of verification and accountability in a different context; auditing should give an account of the structure in which the entity or project operates. Such operational auditing has to be considered against the economic development environment and trends. Accountancy and auditing have been too much concerned with the registration, allocation, and verification of items considered as monetary entities for the business unit, while too little attention has been paid to the processing, registration, valuation, and evaluation of information from both the microeconomic and macroeconomic point of view. For purposes of administration and control, adherence to traditional historical accountancy/auditing practices might be required in many countries for some time to come, but it should not constitute the entire scope and aims of accountancy.

Although any processing of information involves certain qualitative judgments, its evaluation for economic development accountancy needs much more in the way of such judgment. Accountancy as it is now practiced essentially conveys quantifiable and verifiable data of a conservative, retrospective nature. Such conventional accounting does not answer to the necessities of calculation and communication in dynamic times. For accountancy to be more effective for microeconomic and macroeconomic purposes, it has to reflect current economic values. The underlying idea is that all goods, services, and value added have an input-output component, which should be assessed according to their current or replacement value.

Accountancy is essentially a processing and registration of values, and such values have to be economically useful. Production is the consumption of existing values to create new values; for example, the current value of a piece of equipment might be stated as the discounted value of its future incorporated working units. Costs are values sacrificed, but they should not be confused

with acquisition expenses, which apply to the past, and are of a monetary character.

Such an economic approach to accountancy bridges, in my opinion, the big gap between value and cost and would bring greater unanimity to the concepts of value added, income, capital, and surplus. It will also lead to the needed closer integration between enterprise, government, and social accountancy and will also require a more deeply considered coordination between economics and accountancy.

Accountancy that is concerned with current (i.e., replacement) values does not claim to portray financial certainty, but aims to convey more realistic information about the whole economic, technical, and financial field of interest. This wider information is what is needed for the making of effective decisions in economic development.



The new Computer Center operated jointly by the World Bank Group and the Fund: the Bank has taken considerable initiative in applying sophisticated forms of cost-benefit analysis.

In cost-benefit analysis, for example, where we try to compare current and discounted projected costs with discounted forecasted benefits, the need for uniformly *valued* costs and benefits is extremely important. What are benefits and what are costs is largely a question of value determination. Capital-output ratios, which reflect the relationship between the capital investments and the annual resulting income from these investments, equally need information about current value to make them effective for policy making. Again, “current value” accountancy is necessary for input-output analysis; an input-output table, which shows how goods and services interact among industries, is being widely used as an analytical tool and guide to decisions about economic policy.

Current or replacement value does not necessarily mean the actual technical replacement, but rather the economic replacement. The actual replacement price, and the actual decision to replace, might well deviate from the current or replacement value, i.e., the best eco-

¹ An article on Discounted Cash Flow appears in this issue.

accountancy value existing at the present moment. In the business economic (micro) sphere such current values pertain particularly to the fixed assets (plant and equipment) and inventories, which were acquired in the past and are “written off” or consumed over a period of years, according to tax laws, the dogma of conventional accountancy, or other arbitrary criteria. Such write-offs (depreciation) of fixed assets generally constitute an allocation of the historical expenditures, which are unrelated to the current valuation of the services being used, or the value of the remaining services still to be incorporated in the asset. Inventories and other assets are generally—under the principles of conventional accountancy—absorbed or amortized on the basis of their historical expense, and reflected in the financial statements at the lower of cost (expense) or market price.

Financial depreciation, amortization, and inventory consumption often form a large part of the cost of production in industry; such cost estimates are being used, among other purposes, for setting selling prices, income determination, the valuation of inventories of goods produced, efficiency and managerial controls, and planning and policy making. Yet such valuation of assets at historical cost has a distorting effect, since it has a tendency to overstate true profitability or surplus.

At the project or business level, current value income determination conveys that only that portion is income—or surplus—which can be consumed without impairing the net capital structure. It is not a mere subtraction between revenues and allocated expenses. Current value accountancy measurements also reflect the setting aside of adequate reserves for the economic replacement of the assets of the business or project, which simultaneously convey the anticipated replacement financing requirements. In many developing economies there is a tendency to distribute the maximum amount of income, and where income is historically computed there is a danger that in addition to “true income” part of the actual capital of the enterprise may be distributed as being profit. Especially during periods of inflation and rapid technological change—often encountered in developing countries—adherence to historical cost assessments tends to distort true income, surplus, the decision-making factors, the macro (social) accounts and the planning-policy framework.

The economic implications of current value accountancy are that net income during periods of recession and price decline tends to be higher than when based upon historical accountancy, and the reverse during periods of boom. Current value accountancy would have a beneficial or curbing influence on capital formation and investment decisions when it is required, and would tend to work anticyclically. The technique of current value accountancy is then an integral part of “economic development accountancy.” The government sector,

dominant in many developing countries, could be one of its greatest users and promoters. Underlying the adoption and execution of a current value accountancy approach, which has an impact on the whole economic sphere, are the accountancy postulates, standards, and rules. Each standard or rule will have to be looked at from the point of view of its economic merit, and the methodological frame of reference in accountancy should be more than the sum total of conventional accepted practices. The development of a sound accountancy theory, methodology, and practice requires a clear understanding of the foundation and scope of accountancy.

Accountancy in the Development Process

If we want to consider more fully the kind of accountancy needed in planning economic development, we must consider it in three specific fields: development planning, capital formation, and government administration.

Development planning involves the application of rational choices among various patterns of investment. One of the most difficult tasks in development planning is the outlining, screening, selection, and implementation of projects and programs. Import statistics, social accounts data, input-output tables, commodity flows, market studies, and rough cost-benefit calculations might give us an indication of potentialities. However, to prepare, measure, and evaluate projects in accordance with established economic policies and alternatives is a tedious task, and requires the measurement of social and individual benefits and costs. This is an accountancy function.

Cost-benefit analysis, or cost-effectiveness in government, resembles profit maximization for the business firm. It is important that all the benefits and all the cost of a program or project be taken into account. The cost, benefit, and investment return data are also used for the social accounts and other feasibility studies, and these micro data assist in portraying alternative development models. Erroneous or unrealistic cost and benefit information may cause unwise investments and investment fund allocation.

The World Bank has taken considerable initiative in applying sophisticated forms of cost-benefit analysis in its project studies over the past years.

Effective economic planning needs a comprehensive and analytical framework of social (or national) accounts data, and preferably input-output tables derived therefrom. If such social accounts and interindustry data are to be effective, the underlying accountancy information that is available in the private and public sector must be both truthful and economically useful. The techniques of business accountancy are also used in social accounting; they reflect the same equations, they use the double entry debit and credit system, and they both

consolidate; however, they diverge in their requirements as regards the classification, valuation, and accumulation of information.

An input-output system gives a more dynamic idea of the economy, and although these tables are hard to prepare—above all in developing countries—they play a vital role in development planning. The accounting information derived from business activities is at the core of such a matrix, and especially with the application of input-output coefficients current or prospective eco-accountancy values have to be reflected. These coefficients help determine the requirements of prospective projects.

Capital-output ratios, reflecting the quantity of output resulting from a unit of capital input, are used as a measuring tool or policy guide in macro and micro planning. In computing the gross, net, or marginal



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capital-output ratio, the value of the inputs and outputs has to be consistent, incorporating realistic accountancy information and classifications. The basis of depreciation greatly influences the ratio. Comparing historical inputs with current outputs can result in the wrong evaluations and decisions.

Although the techniques involved in input-output tables, capital-output ratios, and cost-benefit analysis are well known, the informational and methodological accountancy requirements have not been adequately evaluated and set forth.

Project evaluation requires a measurement of productivity, and while labor or capital intensity might be desirable from the point of view of those responsible for individual projects it might not be so socially. The degree of labor or capital intensity often depends on the policy objectives of the government, but generally it will be guided by the national income or surplus creation, preferably with the aid of shadow or "accounting" prices. Such shadow or accounting prices are a sort of replacement value under equilibrium conditions relying upon current accountancy information, and they are needed when prices do not reflect real scarcities or surpluses. Such shadow prices may apply to the cost of capital, the cost of labor and foreign exchange and international commodities, and, by their use in economic development, projects could be justified or rejected on a sounder basis of economic reasoning.

The effective implementation and follow-up of a project or program also places a strong demand upon accountancy and auditing as financial and cost statements need to be prepared, cost-benefit assessment and revisions have to be made, and capital and operating financial means and methods to be outlined and secured.

Capital Formation and Development Finance

The existence of sound eco-accountancy will tend to result in the generation of increased individual or social surplus (profit). This in itself can be one of the major sources of capital formation within a country. The availability and execution of sound projects and programs might also stimulate the potential internal and external flow of capital in and to a country. By contrast, the absence of sound projects might cause capital flight. It is an essential aspect of development accountancy, by means of cost-benefit calculations and related measurements, to help identify and implement projects, which should have priority from the point of view of national income, savings, or investment return. Consequently, sound accountancy is able to assist in a more efficient allocation and use of capital and finance funds. The government budget and its fiscal policy can be another major internal source of capital formation, requiring an equally sound accountancy approach.

The accountability, control, and communicating role of accountancy in the enhancement of capital formation is also significant. The availability of comprehensive and reliable financial reporting and appraisals for outsiders, according to certain prescribed standards and rules, will have an effect in building confidence, which in turn tends to stimulate domestic and foreign capital investment.

Government Administration and Budgeting

In many developing countries, the public sector is dominant and the increasing range and complexity of governmental activities requires comprehensive governmental accountancy for social accounting, economic policies, planning, management, controls, and accountability.

The government budget—preferably on the accountancy accrual basis—states the government's financial program for one or more years—and this budget can serve as a valuable tool in the formalization of development plans and programs. The budget is to be seen as an essential instrument for defining national aims and plans and goals (benefits) which have to be achieved at the least cost. Tied in to the governmental budgeting system are the account classifications (economic or functional), which are part of the government accounting system.

A fairly recent development in the budgetary field is "performance budgeting," and its further extension, "planning-programming-budgeting" (p.p.b.). While traditional budgeting is aligned to the role of financial stewardship and stresses the financial aspects of expenditures, performance budgeting is oriented to management and cost accounting and tries to measure the benefits and costs of programs, projects, and activities. It tries to build a link between the projects, the plan, and the budget. The adoption and adherence to a "uniform accountancy system" would greatly facilitate integration between planning and budgeting, and could simultaneously serve other microeconomic and macroeconomic needs.

The recording and classification of government receipts and expenditures also covers the area of fiscal administration. Taxation, which can be a potential form of capital formation, is at the core of government operations. Dogmatic accountancy rules and regulations may hamper the growth of an effective tax structure, and meaningful reporting procedures have to be installed based upon sound accountancy standards and rules.

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Implementing "Economic Development Accountancy"

Economic development accountancy, in addition to a revision of existing accountancy thoughts and concepts, a new kind of systematization, and an educational effort to make this widely known and understood, requires institutional effort. Institutes of accountancy, other professional associations, and academic circles should be called in to assist in evaluating and outlining the concepts, standards, and directives. The initiative and/or support for a needed change in accountancy methodology and practices might come also from international organizations such as the World Bank, the International Monetary Fund, and the United Nations and its affiliated agencies, as these organizations are so deeply involved in the direct and indirect generation and application of economic development accountancy information. They might be able to take part in devising and/or making known more effective accountancy norms and practices. Many of the required modifications in the teaching and practice of accountancy—and accreditation of certificates—preferably also could be implemented with the support of international organizations. An attempt should be made to harmonize the accountancy and auditing concepts, standards, rules, and practices gearing these toward demands of economic development. Revisions of the laws and rules covering economic measurements, reporting, and communication will be needed.

Moving accountancy out of its present narrow dogmatic sphere of operation toward a more effective socio-economic development function will be a slow and perhaps a rather tedious task, but if this objective is not pursued, other disciplines may start filling the economic needs, and accountancy may become too important to be left to the accountants. In an earlier article I showed that, in the past, accountancy has adapted itself to the changing requirements of society; now it must respond effectively to the challenge of economic growth and development.

