

Integrated System of National Accounts for Pakistan: Concepts, Sources and Methods in Brief

IVO C. HAVINGA and W. A. VAN DEN ANDEL

INTRODUCTION

The function of the national accounts is to provide an interrelated and consistent set of economic statistics of the transactors in the economy. Those statistics relate to the circular flow in the economy of production, consumption and accumulation. They are used to assess the performance of the economy and should facilitate the application of economic theory. In Pakistan, a systematic design of the system of national accounts has been lacking. Basically, the system is limited to macro economic production statistics on value-added by sectors and expenditure series. Moreover, the present system lacks internal consistency checks. Discrepancies cannot be assessed due to the existence of residual sectors. As a result, the national accounts have not been exploited in their function for the evaluation of the performance of the economy.

During the mid-1980s, a comprehensive review of the system was made to improve the national accounts. The recommendations which were formulated after the review stated that:

The system should be rebased from 1959-60 to 1980-81;

The system should be extended to include input-output tables, flow-of-funds and institutional sector accounts; and

The system should adopt the integrated national accounts concepts.

The Federal Bureau of Statistics (FBS), being the traditional producer of national accounts statistics, has been given the task to adopt the integrated national

Ivo C. Havinga and W. A. van den Anandel are associated with the Pakistan/Netherlands Project on Improvement of National Accounts Statistics (INAS) at the Federal Bureau of Statistics, Statistics Division.

Authors' Note: This paper based on work undertaken in the Pakistan/Netherlands Project on Improvement of National Accounts Statistics (INAS) at the Federal Bureau of Statistics, Statistics Division in collaboration with the Institute of Social Studies Advisory Service (ISSAS).

accounts concepts and publish the underlying statistical framework.

For this purpose, the FBS is revamping the statistical instruments which will provide the primary data base. Those statistical instruments include business directory structures and data collection schemes. Moreover, the processing and analysis of national accounts data will be fully computerized. The coordination is provided by the classification of the integrated national accounts framework.

The plan of operations calls for the compilation of an input-output table for 1984-85 as a pilot activity and another one for 1989-90. The 1984-85 table is to be based on statistics available for that period. The initiation of new surveys to obtain additional information forms an important part of the preparation for the 1989-90 table. However, the work on the 1984-85 table has assisted in finding important gaps in the economic data available in the country, as well as in determining its quality.

The work for the 1984-85 input-output table also included the preparation of a number of classifications, along with their cross-codes, and the development of directory structures for the formal sectors in the economy.

In parallel with the development of the pilot input-output table, the work on the flow-of-funds and institutional sector accounts has been taken in hand. After the input-output table, the flow-of-fund accounts and the institutional sector accounts for 1984-85 are available, it is rather straightforward to prepare a SAM for the same period.

The new, integrated approach to national accounting will significantly improve the national accounts estimates, even when using mostly already available information. In the case of the 1984-85 input-output table, the integrated structure of the new system will sharply reduce the inconsistencies which are present in the current system. It may be expected that the current procedures and the integrated system will show substantial differences in the absolute level of value-added estimates for a number of sectors, and possibly the national aggregate. Utmost care is taken to ensure full documentation of all steps. This should enable a proper analysis of the causes of any major differences that may show up between the two sets of estimates.

The remainder of this paper will describe the outline of the framework of the integrated national accounts in Section I. In Section II, the sources and methods of the input-output table are presented with reference to the statistical instruments. In Section III, the sources and methods of the institutional sector accounts are described. Out of necessity, the description will be brief. Therefore, supporting documentation should be consulted for more detail.

I. INTEGRATED SYSTEM OF NATIONAL ACCOUNTS

The framework adopted for the integrated accounting system is the conceptual framework of the UN System of National Accounts. The System highlights transaction and transactor detail that is relevant for economic analysis and informed decision-making. It consist of three parts, that is, a make matrix, an absorption matrix and a set of institutional sector accounts.

The make and the absorption matrix together represent the basic components of the input-output table, and are depicted in Table 1. This table is a modification of Table 2.17 of the SNA (pp. 33) and provides the symbolic representation of the system.

In the system of national accounts, the input-output table reflects the transaction detail of the production account. In connection with the production and use of goods and services, the system maintains a classification of transactors by activity groups who are mainly concerned with production related decisions.

For the purpose of realising homogeneous resident establishment-type units, the following classification is maintained in the system: industries, producers of government services, producers of private non-profit services to households and households. The latter in role of consumers and producers of domestic services. Moreover, the overseas sector is included to cover international transactions between residents and non-residents.

The make-matrix (T5.3, T6.3 and T7.3) presents the detail of total domestic production. The columns in the make-matrix correspond with the commodity rows of the absorption matrix and the rows correspond with the columns of the intermediate consumption block of this table. In the make-matrix as well as in the absorption matrix, import duties (T11.4) are included so that GDP and gross output at market prices can be made explicit in both tables.

On the supply side, imports (T24.3), valued c.i.f., are added to the domestic production. Trade and transport margins might be added in a separate column for the conversion to purchasers' prices. On the demand side, the absorption matrix includes the breakdown of intermediate consumption (T3.5, T3.6 and T3.7) by commodity. Furthermore, it includes a breakdown of final consumption expenditure (T3.8, T3.9 and T3.10), increase in stocks (T3.15, T3.16), a breakdown of gross fixed capital formation (T3.17, T3.18 and T3.19), and a column for exports (T3.24), all by commodity. Row and Column 4 depict the net commodity taxes since the make and absorption matrix are valued at basic prices. A breakdown of the cost components of value-added is reflected in T11.5, T11.6 and T11.7.

The institutional sector accounting framework includes all T-accounts of

the present SNA, which are presented in a vertically integrated format. Those accounts are the external trade account, the production account, the income and outlay account, the capital account and the balance sheets. The vertical integration of accounts is further extended by the introduction of a system of institutional sectoring or counterpart transactors, which is further disaggregated by subsectors in accordance with the decision-making units functioning in the economy.

A schematic representation of the central SNA framework is provided in Table 2. The full transaction detail in the income and outlay account and the capital account by the institutional sectors is described in the SNA (pp. 159 to 163). In the present phase of improvement of national accounts the balance sheets are not used but ultimately they should be included. Moreover, the classification of the accounts might undergo slight modifications in the final publication. Still, the objective is to publish the most detailed information on transactions possible.

The institutional sector classification is maintained for the transactors who are concerned with decisions related to finance and distribution. This classification is used for the income and outlay account and the capital finance and accumulation account. For this purpose, the unit of observation is the enterprise which may consist of one or more establishments.

The proposed institutional classification for Pakistan is in alignment with the SNA and reflects the finance and distribution structure of Pakistan. It is noted that the household sector includes unincorporated establishments. For practical purposes, these establishments are defined by an operational criteria as those production units which employ less than 10 persons. In addition, the household sector includes all establishments operating in the agricultural sector. In general, those units do not maintain accounting records and, consequently, cannot be identified as independent legal units separate from the households they belong to.

In principle, the private non-profit institutions serving households are treated separately from the household sector. This bifurcation will be available only after 1988-89 based on survey data.

The recommended institutional sector classification is reported in Table 3.

On the basis of the integrated system of T-accounts and input-output tables by detailed sector, it is relatively easy to produce a Social Accounting Matrix (SAM). The SAM combines the virtues of the national accounts statistics with those of input-output tables by presenting a comprehensive and consistent set of

Table 1

A Simplified Symbolic Representation of the Make and Absorption Matrix in the System

				1	2	3	4	5	6	7	8	9	10	11	12	13/14	15	16	17	18	19	20	21	22	23	24	25	26	27	28					
Opening Assets	Financial Assets		1																																
	Net Tangible Assets		2																																
Production	Commodities	Commodities, Basic Values	3					T3.5	T3.6	T3.7	T3.8	T3.9	T3.10				T3.15	T3.16	T3.17	T3.18	T3.19														
		Commodity Taxes, Net	4					T4.5	T4.6	T4.7	T4.8	T4.9	T4.10					T4.15		T4.17	T4.18	T4.19								T3.24					
	Activities	Industries	5		T5.3	T5.4																													
		Producers of Government Services	6		T6.3																														
Private Services: Domestic Services and Producers of Non-profit Services		7		T7.3																															
Consumption	Expenditure	Households Goods and Services	8																																
		Government Purposes	9																																
		Purposes of Private n-p Services	10																																
	Income And Outlay	Value Added	11																																
	Institutional Sector of Origin	12		T11.4	T11.5	T11.6	T11.7																												
	Form of Income	13																																	
	Institutional Sector Receipts	14																																	
Accumulation	Increase in Stocks	Industries	15																																
		Producers of Government Services	16																																
	Fixed Capital Formation	Industries	17																																
		Producers of Government Services	18																																
		Producers of Private Non-profit Services to Households	19																																
	Capital Finance	Industrial Capital Formation, Land, etc.	20																																
		Capital Transfers	21																																
		Financial Assets	22																																
		Institutional Sectors	23																																
Rest of the World	Current and Capital Transactions	24		T24,3																															
Revaluation	Financial Assets	25																																	
	Net Tangible Assets	26																																	
Closing Assets	Financial Assets	27																																	
	Net Tangible Assets	28																																	

Source: SNA, page 33.

Table 2

Central SNA Framework T-Accounts

Income, Outlay and Capital Flows

EXTERNAL TRADE

Exports
Imports
Trade Balance

PRODUCTION

Gross Output
Intermediate Consumption
Value Added/GDP

INCOME AND OUTLAY

Income Generation

Value Added/GDP
Comp. of Employees
Cons. of Fixed Capital
Import Duties
Other Indirect Taxes
Operating Surplus, Net

Income Appropriation

Income Appropriation
Operating Surplus, Net
Comp. of Employees
Property Income
Sectoral (National) Income/
Current Surplus

Income Distribution

Sectoral (National) Income/
Current Surplus
Indirect Taxes
Direct Taxes
Social Transfers
Current Transfers N.E.C.
Disposable Income

Income Use

Disposable Income
Final Consumption
Net Saving

CAPITAL FLOWS

Redistribution of Saving

Net Saving
Changes in Net Worth

Accum. Tangible Assets

Changes in Net Worth
Gross Fixed Capital Formation
Net Purchases of Land
Net Lending

Accum. Financial Assets

Net Lending
Currency and Deposits
Securities
Other Financial Claims

BALANCE SHEETS

Opening stock

Tangible Assets
Currency and Deposits
Securities
Other Financial Claims
Net Worth

Revaluation

Tangible Assets
Currency And Deposits
Securities
Other Financial Claims
Net Worth

Closing Stock

Tangible Assets
Currency and Deposits
Securities
Other Financial Claims
Net Worth

Table 3

Institutional Sector Classification

S1000 Non-financial Corporations
S1010 Non-financial Corporations, Unassigned
S1020 Non-financial Corporations, Listed
S1021 Non-financial Corporations, Listed, Government Sponsored
S1022 Non-financial Corporations, Listed, Private Domestic
S1023 Non-financial Corporations, Listed, Foreign
S1030 Non-financial Corporations, Unlisted
S1031 Non-financial Corporations, Unlisted, Government Sponsored
S1032 Non-financial Corporations, Unlisted, Private Domestic
S1033 Non-financial Corporations, Unlisted, Foreign
S2000 Financial Enterprises
S2100 Central Monetary Authorities
S2200 Scheduled and Cooperative Banks
S2210 Scheduled and Cooperative Banks, Listed
S2211 Scheduled and Cooperative Banks, Listed, Government Sponsored
S2212 Scheduled and Cooperative Banks, Listed, Private Domestic
S2213 Scheduled and Cooperative Banks, Foreign
S2220 Scheduled and Cooperative Banks, Unlisted
S2221 Scheduled and Cooperative Banks, Unlisted, Government Sponsored
S2222 Scheduled and Cooperative Banks, Unlisted, Private Domestic
S2223 Scheduled and Cooperative Banks, Unlisted, Foreign
S2300 Other Credit Institutions
S2310 Other Credit Institutions, Listed
S2311 Other Credit Institutions, Listed, Government Sponsored
S2312 Other Credit Institutions, Listed, Private Domestic
S2313 Other Credit Institutions, Listed, Foreign
S2320 Other Credit Institutions, Unlisted
S2321 Other Credit Institutions, Unlisted, Government Sponsored
S2322 Other Credit Institutions, Unlisted Private Domestic
S2323 Other Credit Institutions, Unlisted, foreign
S2400 Insurance Enterprises
S2410 Insurance Enterprises, Listed
S2411 Insurance Enterprises, Listed, Government Sponsored
S2412 Insurance Enterprises Listed, Private Domestic
S2413 Insurance Enterprises, Listed, Foreign
S2420 Insurance Enterprises, Unlisted
S2421 Insurance Enterprises, Unlisted, Government Sponsored
S2422 Insurance Enterprises, Unlisted, Private Domestic
S2423 Insurance Enterprises, Unlisted, Foreign
S3000 General Government
S3100 Federal Government
S3200 Provincial and Local Government
S3210 Provincial Government
S3220 Local Government
S3300 Social Security
S4000 Private Non-profit Organisations Serving Households
S5000 Households
S6000 Rest of the World
S9900 Unclassified
S9910 Unclassified
S9990 Not Operating in a Year

production, income and outlay and capital accumulation and finance accounts in matrix form. The opening and closing balances and the revaluation accounts are as yet excluded from the new system.

II. INPUT-OUTPUT TABLE: SOURCES AND METHODS

The criteria used for grouping industries to obtain the branches of the input-output table are multiple. First of all, important economic activities are kept separate. Secondly, economic activities which are important users or generators of foreign exchange are kept separate as far as practical. Thirdly, economic activities are grouped only within the same two-digit industry group. Furthermore, in manufacturing, the large-scale and small-scale sub-sectors have been kept separate.

This procedure resulted in a table with about one hundred branches. The number and composition of the branches may still undergo some changes once a clear picture of data availability at the detailed level is formed. It may therefore be that the number of branches is reduced in the 1984-85 table, while the original structure is used in the 1989-90 table, for which more detailed information will be available.

Activities and Commodities

Industries

Sources: The underlying data sources for industries (T5.3 and T3.5) and value added (T11.5) are partially obtained from surveys and partially from annual reports. For the year 1984-85, survey data are available on mining and quarrying (Census of Mining Industries), large scale manufacturing (Census of Manufacturing Industries), small scale manufacturing (Survey of Small and Household Manufacturing Industries), building construction (Private Building Construction Survey), ownership of dwellings (Rent Survey), transport (Mechanized and Non-mechanized Road Transport), wholesale, retail, hotels and restaurants, and personal services (Distributive Trade Survey) and private business services (various service sector surveys). Data on the other branches are obtained from annual reports, apart from agriculture. Due to lack of data, the agricultural sector will not be disaggregated by crops in the 1984-85 table. Functional statistics from secondary sources are used, where possible, to cross check the survey results.

For the input-output table 1989-90, a comprehensive data collection scheme has been planned. This comprises the newly designed Agricultural Input-Output

additional data collected for a particular good representing commodities for a particular branch but also on price data for a particular good at various points in the marketing chain. Besides, the integrated methodology provides the basis for dovetailing the double deflation procedures by branch to the calculation of the GDP implicit price index at market prices, and the GDP implicit price index to the combination of the individual final demand price indexes.

Producers of Government Services

Sources: The data sources for producers of government services (T6.3 and T3.6) and value-added (T11.6) are provided by the budgets from the federal, provincial and local governments. The latter include metropolitan corporations, municipal corporations, district councils and town committees. Although budgets do exist for lower level government (for instance union councils), these are consolidated with higher levels of local government.

For the purpose of national accounts, actual expenditures and revenues should be collected. However, these actual expenditures are approximated for the federal and provincial governments by the revised budget estimates as actuals are not readily available.

Methods: Government budgets are prepared on a cash basis and not on an accrual basis. Therefore, the budgets record transactions at the time payment or receipt. In contrast, the SNA records transactions the time they take place, reflecting production and delivery rather than payment. In the SNA, a number of transactions are imputed for which payments have been made in the past, will be made in the future, or which involve payments in kind.

Other major differences between the government budget principles and the SNA relate to the organization of the accounting structure and the method of consolidation. Government transactions in the budgets are organized in a single balanced account in which all receipts and payments are shown only once, in addition to their effect on government cash balances. In contrast, the SNA organizes transactions into three separate, though interrelated, balanced accounts: the production account; income and outlay account; and the capital finance and accumulation account. As regards the method of consolidation, the budgets eliminate all transactions between the parts of government being consolidated. The SNA consolidates those transactions between parts of government if they appear in the same account for the two parties to the transaction.

In the analysis and compilation of the production account, the producers of government services are grouped separately from other transactors because of

the different nature of their output and the way they operate. They consist of bodies engaged primarily in public administration and defense; the operation of social security schemes and the provision of community, social and economic services free or at prices that do not cover the cost of production. Moreover, they are grouped separately from departmental enterprises, government-sponsored non-financial enterprises and financial institutions. Those establishment-type units are grouped together in (government-sponsored) industries, because of the similarity of decision-making processes.

In principle, the producers of government services are classified according to individual expenditures or outlays. However, cases might arise where it is not possible to use transactions as units of classification. Instead, the classification has to be based on government bodies as unit of measurement.

The SNA does not require any breakdown of producers of government services by kind of activity. The classification by kind of activity gives a breakdown at divisional level of major Division 9 (i.e. community, social and personal services) of the PSIC. However, an alignment may be realised between the Classification of the Functions of Government (COFOG) and the classification by kind of activity. The intermediate consumption, gross output and value-added will be given in Tables T3.6, T6.3 and T11.6, according to this classification.

At the federal, provincial and local government level, the budget and revised estimates on receipts and expenditures are published in annual budgets. Those transactions are classified on the basis of the 'Chart of Classification of Federal and Provincial Governments Receipts and Disbursement'. This chart has been developed on the basis of the classification for government finance statistics of the International Monetary Fund's (IMF), 'A Manual on Government Finance Statistics' (GFS). Having established the link between the chart and GFS, bridge tables have been prepared to link the transactions to the classification of the SNA. Those bridge tables have been modified to reflect the transaction detail of the input-output table.

Private Non-profit Institutions Serving Households

Sources: At present, no data base is available on the non-profit institutions serving households (T7.3, T3.7 and T11.7). This data gap will be filled with the ISSMI. Consequently, only for the input-output table 1989-90, this activity group will be included.

Final Consumption Expenditure

Households

Sources: Column T3.8 covers the final consumption expenditure of house-

holds. It reflects the outlays of the resident households on new durable and non-durable goods and services less their sales of second-hand goods, scraps and wastes. The commodity distribution will be obtained from the Household Income and Expenditure Survey (HIES) 1984-85 and its revised edition, the Household Integrated Economic Survey 1989-90.

Methods: The commodity breakdown for the household consumption expenditure is obtained using a bridge table between the consumption classification of the HIES and the commodity classification of the input-output table. The revised HIES introduces, among other things, a proper alignment of the commodity classifications used in the expenditure part with the input-output table. Moreover, a distinction has been introduced between the purchase of new and second hand durable goods.

An unresolved issue is the determination of the absolute level of the household consumption expenditure. Although secondary sources might provide checks and balances of some consumption categories, the majority of the consumption categories have to be determined as residual of total final demand.

Producers of Government Services

Sources and Methods: Above the sources and methods of the producers of government services have been described. The method of calculation of the final expenditure of the producers of government services (T3.9) is based on a standard practice recommended by the SNA. First, the gross output is determined by a summation of the intermediate consumption of goods and services, compensation of employees, depreciation and net indirect taxes. Secondly, the commodity and non-commodity sales are subtracted from the gross output to derive the final expenditure.

Private Non-profit Institutions Serving Households

Sources: In the absence of data for 1984-85, the compilation of T3.10, the final consumption expenditure of private non-profit institutions serving households is not possible. A sound data base will be available for the 1989-90 input-output table as the data will be generated by ISSMI for that period.

For 1984-85, this activity group will be treated as residual and consolidated with final expenditure of households.

Methods: The SNA groups the private non-profit institutions serving households separately from industries and producers of government services as they differ in their sources of finance and control. Their activities are usually financed

through membership fees, grants and contributions from individuals, business units and government. They might sell commodities to households but the receipts will not fully cover the cost of production. The operational criteria proposed for use by the FBS is that a unit should engage at least two full-time employees and receipts from sales of commodities should not cover more than 50 percent of the cost of production. In case the first criteria is not met, the unit is excluded from the producers of the private non-profit services to households and included in households. If the second criteria is not met, the bodies will be included in industries.

Private non-profit institutions serving households are classified by purpose or aim. This classification coincides with the classification by kind of activity for industries. The following classification is recommended: education, health, welfare institutions, religious institutions and other social and recreational institutions (including political parties, trade unions, civic associations, etc).

The method of calculation of the final expenditure of those institutions in the same as for the producers of government services.

Increase in Stocks

Industries

Sources: The increases in stocks are measured only for establishments in the following industries: mining and quarrying, large scale manufacturing and distributive trade. Data on stock changes in the other industrial sectors is lacking.

Methods: The changes in stock from work-in-progress and finished products will be consolidated. Changes from raw materials will be prorated on the basis of the material input structures and assigned to the branch of origin. In the absence of appropriate stock price indexes, valuation at a uniform price is not possible.

Producers of Government Services

Sources and Methods: The government (T3.16) maintains stocks of agricultural products for strategic purposes. The related information is available from the line departments.

Gross Fixed Capital Formation

Industries

Sources and Methods: Information on gross fixed capital formation by industries (T3.17) will be obtained from the various industry surveys. These surveys

collect information on investment for the following investment goods: buildings, land improvement, transport equipment, machinery and equipment, furniture and fixtures and other goods. These will be allocated by industry of origin. Where possible, supplementary information will be obtained from the State Bank of Pakistan on loan disbursements to manufacturing units under construction and foreign direct investment.

Producers of Government Services

Sources and Methods: Data on investment in social and physical infrastructure by the governments (T3.18) is obtained from the annual budgets. The classification of gross fixed capital formation is further extended for this purpose to include roads, highways and bridges, irrigation works and embankment and drainage. It may be noted that the annual budgets only provide overall investment figures and not the input structures. Therefore, representative schemes are identified for the different types of works and the input structures determined with the assistance of experts in this field.

Rest of the World

Sources: Two data sources are available for the commodity breakdown of exports and imports. These are the trade statistics from the FBS and the balance of payments statistics of the State Bank of Pakistan (SBP). The SBP also includes the international trade in services. Discrepancies between the data sets do exist as the FBS data from customs are on transaction basis and the State Bank data from the foreign exchange control system are on cash basis. Moreover, the FBS data for imports are valued c.i.f. while the SBP data are valued f.o.b.

Methods: The discrepancies in the two data sets have to be harmonized. The imports of services have to be adjusted for the proportion of services rendered by non-resident establishments on the imports of merchandise. Moreover, the services rendered by resident transport companies for the imports of merchandise valued c.i.f. have to be corrected by an export entry in services. Finally, the protective import duties have to be identified on the imports of merchandise and subsequently assigned to the imports of merchandise. Although these corrections are theoretical justified, they can only be crude due to the paucity of data.

III. INSTITUTIONAL SECTOR ACCOUNTS: SOURCES AND METHODS

In the following sections, the sources and methods of the institutional sec-

tors accounts will be described. This will be in continuation of the preceding section to prevent repetition.

Households

Sources and Methods: The household sector accounts from 1984-85 to 1987-88 will be based on the Household Income and Expenditure Survey (HIES). Moreover, this sector will include all establishments employing less than 10 persons. For the same period, the sector includes private non-profit institutions serving households due to non-availability of data.

From 1989 onwards, this sector will be based on the Household Integrated Economic Survey (HIES). The related questionnaire is a revision of the questionnaire used for the Household Income and Expenditure Survey. The present format has been extended to include and integrate the transaction detail of the production, income and outlay and capital accumulation and finance accounts of the system. Moreover, worksheets have been added to cover the operations of those agricultural and non-agricultural establishments which employ less than 10 persons. Those worksheets are to be filled if the unit is owned and operated by one of the household members. From the worksheet, the operating surplus can be determined which can be cross-checked with the income reported in the income section of the questionnaire. In addition, the questionnaire allows for the determination of the current wealth position of the household by means of questions on the ownership of fixed and financial assets and claims.

Consequently, the new format provides internal consistency for each household. Moreover, appropriate sourcing of the transactions by counterpart institutional sectors have been included to maintain external consistency. The content of the questionnaires is linked to the structure of the SNA by means of bridge tables.

Financial Sector

Sources and Methods: The various publications on banking statistics of the State Bank provide the details for the compilation of the 4 sets of accounts for the subsectors 'Central monetary authority' (SBP) and 'Scheduled and cooperative banks'. The latter includes the scheduled banks and the cooperative banks. Those accounts also provide ample information on the sourcing of the changes in financial assets and liabilities.

The major limitation of the above sources is the absence of a cross-tabulation between types of deposit holders and types of deposits. A minor issue

relates to the inclusion of financial institutions in the consolidated tables of scheduled banks in the SBP publications while they are classified as 'Other credit institutions' in the FBS classification. Moreover, a double counting does arise for the Punjab Provincial Co-operative Bank since it is included in the consolidated tables on scheduled banks and the cooperative banks.

The sources of the subsector 'Other credit institutions' are the annual reports. Those annual reports have the limitation that they contain considerable less detail than the SBP publications on the other financial subsectors.

Non-financial Sector

Sources and Methods: The annual reports of the non-financial public limited companies and all other government sponsored organisations form the sources of data for the compilation of the integrated set of accounts. A compilation sheet is designed to obtain the flows from the profit and loss accounts and the balance sheets at the greatest level of detail possible. From the notes to the reports, the sourcing of the flows with counterpart institutional sectors can be identified.

The compilation of data for this sector is restricted to these two subsectors. Although the number of enterprises is small (approximately 5 percent of the total number of companies in this institutional sector), they cover 75 percent of the paid-up capital and thus provide a good basis for estimation.

This sector also contains a residual subsector for other quasi-corporate enterprises and non-profit institutions serving businesses. Other sources such as the Census of Manufacturing Industries provide supplementary information, in particular, information on saving and investment.

Government

Sources and Methods: With reference to the previous section, it is recalled that the transactions reported in the annual budgets of the federal, provincial and local bodies government are linked to the four sets of accounts of the SNA with bridge tables. By definition the budgets are internally consistent. Moreover, the budgets provide various sourcing options to counterpart institutional sectors for external balancing. The annual budgets of the federal and local bodies are available on tape. The provincial budgets are to be processed on tape.

Rest of the World

Sources and Methods: In principle, the balance of payments statistics cover

the rest of the world sector. However, due to various consolidation and netting procedures followed by the SBP, a considerable amount of sourcing detail to counterpart domestic institutional sectors is hidden.

Comments on
“Integrated System of National Accounts for Pakistan:
Concepts, Sources and Methods in Brief”

The paper is essentially a progress report of the project “Improvement of National Account Statistics” being carried out at the Federal Bureau of Statistics. The project aims at developing an input-output table, flow of funds, and institutional sector account with a view to providing an integrated system of the National Accounts of Pakistan. This, indeed, is a commendable effort and both the authors and the project team should be complimented for the useful work they are doing for improving the reliability of statistics relating to the National Accounts of Pakistan. It is significant that the national Accounts data show considerable improvements by applying the consistency check even when the existing information is being used. Nevertheless, more data are being generated in the Federal Bureau of Statistics to further improve the National Accounts.

My comments on the paper relate four broad areas relating to National Accounts. These areas include sectoral distribution, methods for valuation of transactions, the use of single or double deflation methods to prepare estimates of value added at constant prices, and consumption broken down by the sectors of production.

While the paper does not report the sectoral distribution being used in the input-output table, it indicates for criteria on the basis of which production activities would be classified. These four criteria are the importance of an economic activity in gross domestic product, importance of an economic activity in foreign exchange earnings, grouping of activities in the same one-digit classification of production sectors and the scale of operation. These four criteria are, no doubt, useful in selecting the sectoral distribution. However, they may not be sufficient to clearly identify the economic activities employing significantly different technologies. In particular, if the technology used in the small and large-scale sub-sectors in various production activities is quite similar, the input-output matrix may be singular.

While the paper does raise the question of the valuation of the flows of goods and services and suggests all the three alternatives, one wonders why no decision has so far been taken on the method of valuation while the project is at an advanced stage. This needs to be taken on a priority basis as the data

requirements would be significantly different.

The Double Deflation Method has been preferred over the Single Deflation Method in the study for obtaining estimates of value added at constant prices. The Double Deflation Method is superior in the sense that the output and the intermediate inputs are deflated at different rates in correspondence with the rates of increase in prices of the two. However, the Double Deflation Method assumes that the technology remains constant. Therefore, if the technology does show significant changes over the period for which value added is being deflated, the Double Deflation Method may yield absurd results including negative value added at domestic prices. Therefore, the validity of this method would largely depend on the frequency with which the base year is changed. Considering that in Pakistan the base year for National Accounts has been changed only once after a period of twenty years, the prospects of frequent changes are rather limited. Therefore, under these circumstances single deflation may be preferred over double deflation.

The authors have suggested that they would use Household Income and Expenditure survey data to determine the consumption of various commodities. These will then be compared with the production data to determine the vector(s) of final output. Since household income and expenditure survey data generally overstate consumption, the consumption of various products may exceed the total availability of goods. Under such circumstances, which are quite likely, what method would be employed by the authors to bring about an equilibrium between the consumption and the availability of goods and services by each of the production sector will have a significant bearing on the results. This assumes special significance as data on stocks virtually do not exist in Pakistan.

A. R. Kemal

Pakistan Institute of
Development Economics,
Islamabad.