



Discussion Paper No.141

A Financial Social Accounting Matrix for Pakistan

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March 2006

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ABSTRACT

There are few social accounting matrices for Pakistan but they are not up dated or based on very old input output table. Furthermore, the available SAMs ignore the details of the financial transactions. This paper constructs the aggregated and disaggregated financial social accounting matrices for Pakistan for the year 1999/2000. It uses the latest supply and use table and flow of funds data, and to the best of our knowledge, it is the first detailed financial social accounting matrix for Pakistan. This study provides not only the data but also a basic framework of a financial social accounting matrix for Pakistan. Without going to the multiplier analysis, a number of key characteristics of the real and financial sides of the economy are derived from direct inspection of the aggregated and disaggregated financial social accounting matrices for Pakistan. The main purpose of building financial social accounting matrix is to obtain core databases for a financial computable general equilibrium model for Pakistan, which will be used to analyze the behavior of public debt in the country. However, several other researches can be initiated using the current financial social accounting matrix.

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A Financial Social Accounting Matrix for Pakistan

1. Introduction

A social accounting matrix (SAM) is concerned with the organization of information usually about the economic and social structure of the country. It includes the inter-industry relationships and incorporates in it, information about the distribution and generation of income of an economy. Thus, a SAM links industrial activities, factors of production, and institutions, representing an initial equilibrium of the economy. The data organized in a Social Accounting Matrix are most convenient framework for keeping track of the circular flow of income and expenditure in an economy.¹

There are few social accounting matrices for Pakistan, but they are based on the input output table of 1990/91 or earlier.² For more stable economies this may not be a serious problem, but for a rapidly growing or changing economy, such as Pakistan, this lag may be a significant limitation. Hence, there is a high need to update the social accounting matrix so that it should reflect the current structure of the economy. Furthermore, since there is significant financial development in the country during the last two decades, and also the official flow of funds data is now available, it will be more worthy to move from a real social accounting matrix to a financial social accounting matrix for Pakistan's economy, containing the details of the financial institutions and flows of assets and liabilities.

This paper uses the latest official supply and use table 1999/2000 and flow of funds data 1999/2000 of Pakistan to construct the first detailed financial social accounting matrix for Pakistan for the year 1999/2000.³ The main purpose of building financial social accounting matrix is to obtain core database for a financial computable general equilibrium (CGE) model for Pakistan that will be used to analyze the behavior of public debt in Pakistan.⁴

The construction process of the financial social accounting matrix in this paper consists of two steps. First, an aggregate financial social accounting matrix is assembled, providing a consistent macro-economic framework of Pakistan's economy. Second, a disaggregated financial social accounting matrix is assembled,

¹ In fact, SAMs can be viewed as a straightforward extension of input output tables in that they capture the distribution of income in addition to production and demand.

² See, Government of Pakistan (1993), Iqbal and Siddiqui (1999), and Dorosh et al. (2004).

³ The flow of funds data utilized in this study is available in published form (see State Bank of Pakistan 2003), however, the supply and use table is not published yet, but available in unpublished preliminary shape.

⁴ For a financial macroeconomic model based on Pakistan's flow of funds data of 1999/2000, see Waheed (2005).

that provide a consistent macro-economic framework with financial flows. Without going to the multiplier analysis, the key characteristics of the real and financial sides of the Pakistan economy will be highlighted by direct inspection of the aggregated and disaggregated financial social accounting matrices for Pakistan.

This paper consists of six sections. Following brief introduction, section 2 describes the structure of the aggregated financial social accounting matrix. Section 3 shows the data of aggregated financial social accounting matrix for Pakistan for the year 1999/2000 and describes the key characteristics of Pakistan's economy. Section 4 presents the structure of the disaggregated financial social accounting matrix. Section 5 shows the data of disaggregated financial social accounting matrix for Pakistan for the year 1999/2000 and describes it. The last section provides conclusion and set directions for further research.

2. Structure of Aggregated Financial SAM

A real social accounting matrix can be thought of as an extended set of national accounts that disaggregates value added in each production activity into payments to various factors and disaggregate income and expenditure of various institutions. In fact, it puts forward the production process, the origin of income and its distributions to different institutions, and then several ways these institutions use their income. Thus, the SAM illustrates accurately the circular process of 'demand' leading to 'production', production leading to 'income', which in turn leads back to 'demand'.

Mathematically, a social accounting matrix is a square matrix in which each account is represented by a row and a column. The incomings (or incomes) are shown by 'row' and the outgoings (or expenditures) are shown by a column. Thus, the double-entry book keeping of transaction in the social accounting matrix is performed by a single entry at the intersection of the account.

Suppose i ($i = 1, 2, 3, \dots, n$) is the index of the rows and j ($j = 1, 2, 3, \dots, n$) is of columns. The general element of the social accounting matrix, t_{ij} is defined as expenditure of the account j that constitutes a receipt for account i . The internal consistency of the social accounting matrix guarantees that:

$$\sum_{j=1}^n t_{kj} = \sum_{i=1}^n t_{ik} \quad (k=1, 2, 3, \dots, n)$$

The Walras' law is verified in a balanced social accounting matrix. If the above identity hold for $(n-1)$ accounts, then it also holds for n^{th} account.

Generally the real SAM comprises six accounts: activities, commodities, factors, institutions (mainly households, firms, government, and rest of the world), and an aggregated capital accounts. In a financial SAM, each institution has two types of accounts: a current account as in a simple real SAM, and a capital account. In a real SAM, there is already an aggregated capital account but this account is single for the whole economy, as savings of each institution goes to the total investment, and there is no account for the participation of each one of them in the gross fixed capital formation. In addition, this capital account records only the flows of physical capital. The creation of a distinct capital account for each institution allows to keep details of the institutions' various assets (physical or financial). The financial account keeps the details of the nature and the structure of financial resources and uses of economic institutions. It can consist of the currencies, deposits, bonds, loans, to name a few.

The classification of accounts in a social accounting matrix can take various forms, depending on how the constituent accounts are defined and one's analytical interest and specific policy concern. Six major types of accounts are distinguished in the current aggregated financial social accounting matrix for Pakistan. These are: (i) activities, (ii) commodities, (iii) factors of production, (iv) current account of institutions, (v) capital account of institutions, and (vi) financial account. The structure of the aggregated financial social accounting matrix can be described by going through the Table 2.1 in appendix-A. The notations used in the table are explained in appendix-B.

2.1. Activity Accounts

Activity or production accounts are used to buy raw materials and hire factor services to produce commodities. The receipt (row) of the activity account derives from sales in the domestic and foreign (exports) markets.⁵ Their expenditures (column) include the purchase of intermediate commodities, value added (wage payments to labors and rent to fixed factors), and indirect taxes. The current aggregated financial social accounting matrix for Pakistan includes six activities⁶: (i) agriculture, (ii) mining and quarrying, (iii) manufacturing, (iv) electricity, gas and water, (v) construction, (vi) other sectors. Some other disaggregation could have been chosen, involving a more or less detailed treatment of production structure. The split into six sectors serve our current need for illustration.

⁵ The receipts may also include export subsidies received from government. Exports tax is recorded as negative export subsidies.

⁶ These six activities are an aggregation of 157 industries of the supply table for Pakistan for the year 1999/2000.

2.2. Commodity Accounts

The distinction between activities and commodities is not a standard feature of all social accounting matrices. But this distinction can be very useful as one production activity can produce several commodities or several production activities sometime contribute to only one commodity. Since in the supply table for Pakistan, one activity is producing more than one commodity, a distinction is made between activities and commodities in the current social accounting matrix.

Commodity account represents domestic product markets. Commodity accounts (column) purchase domestically produced commodities and imports. Their receipts (row) proceed from: sales in the domestic market of intermediate products to activities, final goods to household and government for consumption⁷, and investment goods to the capital account. The intersection between the activity columns and the commodity rows gives the input-output relationships. There are six commodities (similar to the name of the activities) in the current aggregated financial social accounting matrix for Pakistan. The activity and commodity breakup also reflect the broad classification of sectors used in the national accounts of Pakistan in the Economic Survey.⁸

2.3. Factor Accounts

Factor accounts show how value added is distributed to the factors of production, and how the factor income is transferred to various institutions. There are two factors of production (labor and capital) in the current financial social accounting matrix for Pakistan. The row entry in the labor account represents the compensation of employees (wages and salaries), which the labor receives from the sale of their services to the activities. Income payment received by the capital factor account in the form of rent and profit is computed as a residual payment. In the column, the labor account pays wages and salaries to households, whereas the capital account pays capital income to household, non financial firms and banks.

2.4. Current Account of Institutions

Current account shows the sources and uses of income of the institutions. The sources of income mainly include labor and capital income. Among the uses, part of the income is consumed, part is redistributed among institutions themselves, and the remaining part is saved. The current account of the aggregated financial

⁷ Following standard national accounting practice, only households and government make consumption expenditure.

⁸ See, Government of Pakistan 2003/04, p.9.

social accounting matrix for Pakistan comprises of five institutions. These are: (i) households, (ii) non-financial firms, (iii) banking system, (iv) government, and (v) rest of the world (ROW).⁹

Household income includes the factor incomes and transfers from government, non-financial firms and rest of the world. Household expenditure consists of consumption and income taxes, with residual saving transfer to their capital account. Non-financial firms receive capital income (profits) and transfers from government. Their expenditure consists of corporate tax payments, transfer to the household and rest of the world. The residual savings of the non financial firms go to their capital account. The banking system only receives capital income which is saved. Their role is very large in financial transactions. They do, in fact represent capital and money market through which most of the financial transaction take place.

Government receipts are taxes on production, imports and income (indirect and direct taxes) and current transfers from abroad. Expenditures of government are on current consumptions, transfers to the household and firms, while government savings are transferred to the capital account.

The rest of the world account represents all the transaction between the domestic economy and foreign countries. The rest of the world (ROW) receipts are payments of domestic economy for imports and non financial firms' current transfer to abroad. The rest of the world expenditures are payments for exports, transfer to domestic economy (household and government) and foreign savings (net foreign capital inflow or current account deficit).

2.5. Capital Account of Institutions

In most of the SAMs, there is only one aggregate capital account of all institutions. In principle, there is no reason why each institution should not have a separate capital account. Here, we disaggregate capital account not only with respect to institutions but also between physical and financial capital.¹⁰ The rows of capital account show here the resources available to institutions in the form of savings and financial liabilities. The columns show the use of the available resources by institutions in investment goods and on aggregated financial assets. Thus, the incurrence of liabilities together with gross savings yields the total finance available

⁹ It is not customary to distinguish non financial firms to finance institutions (such as banks) in a real SAM. In the current aggregated financial SAM, such distinction is introduced between these two types of firms.

¹⁰ Financial capital account is labeled as financial account.

for investment. Total investment in turns is the sum of gross fixed capital formation (physical investment) and acquisition of financial assets (financial investment).¹¹

2.6. Financial Account

The institutions incur financial liabilities to other institutions and also acquire financial assets from other institutions. This is recorded in the financial account. Because a liability automatically creates a corresponding asset, they must balance in aggregate. The financial account in the current aggregated financial social accounting matrix is only a single row and column. In the disaggregated financial SAM, this account will be extended to show the details of the nature and the structure of financial resources and uses of economic institutions.

3. Aggregated Financial SAM for Pakistan

The year 1999/2000 is chosen as the base year for the construction of the financial social accounting matrix for Pakistan, since the most recent available official supply and use table and flow of funds data are for the year 1999/2000. Thus, the current financial SAM for Pakistan can be viewed as a combination of the flow of funds and supply and use table. It is comprehensive and provides the details of the real-financial transaction during the year 1999/2000. The linkages between the real and financial aspects of the economy are provided by the savings of the institutions. The other data sources used to construct the financial social accounting matrix include national accounts statistics and government budget data.

When constructing social accounting matrix there is recurring problem of data unavailability and inconsistencies. This is particularly more serious when dealing with the developing countries' data. In the construction of the financial SAM for Pakistan, we faced several inconsistencies in the data. This is simply due to the fact that supply and use table is in unpublished preliminary shape. Also there are statistical discrepancies in the official published flow of funds data.¹² Hence, as a part of the data compilation effort, some of the data adjustments and disaggregations have been based on judgments and assumptions. Furthermore, the chosen disaggregation strategy clearly reflects not only the intended use of the database, but also the data limitations.

¹¹ In a SAM, where financial account is not present, total investment is identically equal to total savings (domestic and foreign).

¹² These discrepancies are mainly attributable to data deficiencies in terms of reporting, coverage, classification, timing, and valuation.

The data of aggregated financial social accounting matrix for Pakistan for the year 1999/2000 is reported in Table 3.1 in appendix-A.¹³ The discussion on this table is presented in the following sub sections.

3.1. Structure of Production

Table 3.2 shows the production structure of the economy. It gives breakdown of GDP estimates with income and expenditure approaches. These estimates are derived from Table 3.1 of financial SAM for Pakistan for 1999/2000. The estimates of GDP derived from Table 3.1 are almost similar to the estimates of national accounts.¹⁴

Table 3.2: Expenditure and Income approaches of GDP

<u>Expenditure approach of GDP</u>		
	(Rs. Million)	(% of GDP)
Household consumption	2404837	76.41
Government consumption	351624	11.17
Gross investment	503980	16.01
Exports	495655	15.75
Imports	-608929	-19.35
Gross Domestic Product	3147167	100.00
<u>Income approach of GDP</u>		
Wage payments	523076	16.62
Capital income	2369276	75.28
Tax on production	174511	5.55
Tax on imports	80304	2.55
Gross Domestic Product	3147167	100.00

Source: Authors' calculations

Under the expenditure approach, final household consumption expenditure contributed in GDP by 76.41 percent, final government expenditure by 11.17 percent, total gross fixed capital formation by 16.01 percent, aggregate exports by 15.75 percent and aggregate imports by 19.35 in the year 1999/2000. Similarly, under the income approach, the share of wage payments to labor in GDP is 16.62 percent and capital income share was 75.28 percent. The share of net taxes on production and import duties in GDP was 5.55 percent and 2.55 percent respectively in the year 1999/2000. A low share of wages in total factor income shows that most of the workers in Pakistan are self employed and there income is recorded as capital income.

Comparison between sectors can be made in terms of the share of value added in GDP, and gross

¹³ Some estimate of the real side may change after the availability of the final published supply and use table. This will increase the worth of the current financial SAM and make estimates more effective and reliable.

¹⁴ See, Government of Pakistan 2002/03, p.14.

investment in each sector. Table 3.3 shows the gross value added and investment during 1999/2000.¹⁵ It reveals that agriculture sector contributed by 25.7 percent in GDP, mining and quarrying by 1.8 percent, manufacturing by 25.13, electricity, gas and water by 3.39 percent, construction by 1.47 percent and other sectors by 42.51 percent in the year 1999/2000. The gross investment as a share of total investment was 11.92 percent in agriculture, 17.83 percent in manufacturing, and 49.61 percent in other sectors during 1999/2000.

Table 3.3: Gross Value Added and Investment during 1999/2000 (Rs. Million)

Production sectors	Gross Value added	% share in GDP	Gross Investment	% share in Total INV
1. Agriculture	808943	25.70	60081	11.92
2. Mining & Quarrying	56772	1.80	14105	2.80
3. Manufacturing	790885	25.13	89845	17.83
4. Electricity, Gas & Water	106670	3.39	48591	9.64
5. Construction	46175	1.47	41344	8.20
6. Other sectors	1337722	42.51	250015	49.61
Total	3147167	100.00	503980	100.00

Source: Authors' calculations

Table 3.4 shows the estimate of goods for domestic and exports markets. It is clear that bulk of the agriculture production (98.44 percent) was consumed domestically, while only 1.56 percent was exported to the world market in the year 1999/2000. Similarly, 94.92 percent of the mining and quarrying production was consumed domestically and 5.08 percent was exported. Manufacturing sector's 80 percent production was used in the domestic market and 20 percent was exported to foreign market. For rest of the sectors all output produced was consumed domestically. On the other side, 95.15 percent exports were coming from manufacturing, 4.03 percent from agriculture and 0.82 percent from mining and quarrying, during the year 1999/2000.

Table 3.4: Goods for Domestic and Exports markets during 1999/2000 (Rs. Mil.)

	Gross Output (GO)	Domestic supply (DS)	(DS) of % (GO)	Exports (EXP)	(EXP) % of (GO)	% Share In total (EXP)
1. Agriculture	1279078	1259112	98.44	19966	1.56	4.03
2. Mining & Quarrying	80163	76093	94.92	4070	5.08	0.82
3. Manufacturing	2357780	1886161	80.00	471619	20.00	95.15
4. Electricity, Gas & Water	356542	356542	100.00	0	0.00	0.00
5. Construction	256192	256192	100.00	0	0.00	0.00
6. Other sectors	5199103	5199103	100.00	0	0.00	0.00
TOTAL	9528858	9033203	94.80	495655	5.20	100

Source: Authors' calculations

¹⁵ Gross value added is estimated as sum of wages and salaries, rental capital, tax on production and tax on imports.

Table 3.5 shows the sectoral shares in aggregate wage payments to labour and capital income. Agriculture's share in total wage payment was 20.21 percent, while manufacturing sector share was 16.33 percent in the year 1999/2000. Similarly, agriculture sector contributed in aggregate capital income by 28.32 percent, while manufacturing sector contributed by 24.95 percents. A high share of agriculture in capital income is a reflection of land ownership structure in that sector.

Table 3.5: Sectoral shares in Wages and Capital Income during 1999/2000 (Rs. Million.)

Production sectors	Wages of Employees	% share in wages	Capital income	% share in Capital Income
1. Agriculture	105693	20.21	670952	28.32
2. Mining & Quarrying	0	0.00	42486	1.79
3. Manufacturing	85432	16.33	591192	24.95
4. Electricity, Gas & Water	7340	1.40	98891	4.17
5. Construction	39203	7.49	3509	0.15
6. Other sectors	285408	54.56	962246	40.61
Total	523076	100.00	2369276	100.00

Source: Authors' calculations

3.2. Sources and Uses of Income

Table 3.6 shows the sources and uses of income of various institutions during the year 1999/2000. These estimates are derived from Table 3.1 of aggregated financial social accounting matrix for Pakistan for the year 1999/2000. Table 3.6 indicates that all wages were allocated to the households, which was 18.69 percent of households' total income. The capital income of households' was 70.5 percent of its total income. A very high share of households in capital income reflects the wide spread presence of households enterprises and unincorporated capital (self-employed production activities). The households also received transfers from non financial firms (6.19 percent), transfers from government (0.02 percent) and transfers from rest of the world (4.61 percent) during the year 1999/2000. On the expenditure side, households spent 85.95 percent of their total income on consumption, 0.49 percent on income taxes and remaining 13.56 percent was saved.

Non financial firms' most of the income was capital income (99.40 percent), while their expenditure were corporate taxes (25.89 percent), transfer to the households (45.35 percent), and transfer to the rest of the world (19.50 percent) in the year 1999/2000. The residual 9.26 percent of their income was saved. Banking system (including central bank) received only capital income which was saved by them.

Table 3.6: Sources and Uses of Incomes of Institutions during 1999/2000

<u>HOUSEHOLDS</u>	(Rs. Million)	% share
Wages of labor	523076	18.69
Capital income	1972476	70.50
Transfers from firms	173110	6.19
Transfers from government	436	0.02
Transfers from rest of the world	128893	4.61
Total income	2797991	100.00
Final consumption expenditure	2404837	85.95
Direct tax paid to the government	13705	0.49
Savings	379449	13.56
Total expenditure	2797991	100.00
<u>NON-FINANCIAL FIRMS</u>		
Capital income	379449	99.40
Transfers from the government	2295	0.60
Total income	381744	100.00
Corporate taxes	98848	25.89
Transfers to the households	173110	45.35
Transfers to the rest of the world	74430	19.50
Savings	35356	9.26
Total expenditure	381744	100.00
<u>BANKING SYSTEM</u>		
Capital income	17351	100
Savings	17351	100
<u>GOVERNMENT</u>		
Indirect taxes on production	174511	42.02
Import duties	80304	19.34
Income tax from households	13705	3.30
Corporate tax from firms	98848	23.80
Transfers from the rest of the world	47940	11.54
Total income	415308	100.00
Final consumption expenditure	351624	84.67
Transfers to the households	436	0.10
Transfers to the firms	2295	0.55
Savings	60953	14.68
Total expenditure	415308	100.00
<u>REST OF THE WORLD</u>		
Imports of goods & non-factor services	608929	89.11
Transfers from non financial firms	74430	10.89
Total income	683359	100.00
Transfers to the household	128893	18.86
Transfers to the government	47940	7.02
Exports of goods & non-factor services	495655	72.53
Savings	10871	1.59
Total expenditure	683359	100.00

Source: Authors' calculations

Government income included indirect taxes on production (42.02 percent), import duties (19.34 percent), income taxes on households (3.3 percent) and corporate taxes on non financial firms (23.80 percent) in the year 1999/2000. Government also received transfers from rest of the world, which was 11.54 percent of their total income. Government used its income on current consumption (84.67 percent), transfers to the households (0.10 percent), transfers to the firms (0.55 percent), while government saving was 14.68 percent.

Finally, the rest of the world received 89.11 percent of its total income from imports of goods and non factor services by Pakistan, and 10.89 percent as transfers from the non financial firms. The rest of the world spent 72.53 percents on exports, 18.86 percent on transfer to the households, and 7.02 percent on transfers to the firms in the year 1999/2000. The balancing 1.59 percent was foreign savings.

3.3. Assets and Liabilities

Table 3.7 shows the changes in physical and aggregate financial assets and liabilities of institutions. The sum of the savings and financial liabilities are the total funds available for the institutions, while on the assets side the institutions total assets are the sum of their physical and aggregate financial assets. It is clear that in total savings the greatest contribution was of households (75.29 percent), followed by the government (12.09 percent and non-financial firms (7.02 percent). The banking systems and rest of the world contributions in total savings were 3.44 percent and 2.16 percent respectively during the year 1999/2000.

Table 3.7: Changes in Assets and Liabilities of Institutions during 1999/2000 (Rs. Million)

Institutions	Savings	% share of Total SAV	Liabilities	% share in Inst. Funds	Total Funds of Institution
Households	379449	75.29	4898	1.27	384347
Non-Financial Firms	35356	7.02	47161	57.15	82517
Banking system	17351	3.44	268267	93.93	285618
Government	60953	12.09	364108	85.66	425061
Rest of the World	10871	2.16	11921	52.30	22792
Total	503980	100.00	696355	58.01	1200335

Institutions	Physical Investment	% share in Total INV	Financial Investment	% share in Inst. Assets	Total Inst. Assets
Households	116582	23.13	267765	69.67	384347
Non-Financial Firms	67032	13.30	15485	18.77	82517
Banking system	27750	5.51	257868	90.28	285618
Government	292616	58.06	132445	31.16	425061
Rest of the World	0	0.00	22792	100.00	22792
Total	503980	100.00	696355	58.01	1200335

Source: Authors' calculations

The lower part of Table 3.7 shows that most of the physical investment was made by the government (58.06 percent) followed by the households (23.13 percent). It is worth to note that contribution of non financial firms in total physical investment was only 13.3 percent, while banking system investment contribution was 5.51 percent in the year 1999/2000. On the other hand, within total investment of institutions, the investment in financial assets was 69.67 by households, 18.77 by non financial firms, 90.28 by banking system and 31.16 percent by the government.

4. Structure of Disaggregated Financial SAM

In this section we present the structure of a disaggregated financial social accounting matrix for Pakistan. Table 4.1 in appendix-A shows the detailed structure of the disaggregated financial SAM.

4.1. Extended Institutions Accounts

As with any other data compilation and estimation efforts, the level of disaggregation chosen for the current financial SAM for Pakistan depended on two factors: first the purpose of the subsequent analysis, and , second, the availability of data. Given that the intension is to use the current financial SAM to build a financial CGE model for Pakistan to analyze the behavior of public debt, much of the efforts have been devoted to disaggregate the financial institutions and financial account.

In the disaggregated financial SAM the activities, commodities, and factor accounts are intact.¹⁶ However, in the institutions accounts, the banks are now disaggregated into central bank and banking system. This distinction of financial institutions is useful for a meaningful analysis of monetary policy in the country.

4.2. Extended Financial Accounts

The aggregated financial account is now disaggregated with the introduction of 18 monetary and financial assets. There are three types of currencies: (a) government currency, (b) central bank currency; and (c) foreign currency. Four types of deposits are introduced: (a) deposits in the government accounts, (b) deposits in the central bank, (c) deposits in the banking system, and (d) deposits in the foreign banks. Four types of bonds are issued: (a) government bonds, (b) banking system bonds, (c) non financial firms bonds, and (d) foreign bonds. All six institutions are giving loans: (a) government loans, (b) central bank loans, (c) banking system loans, (d) non financial firms' loans, (e) household loans, and (f) foreign loans. There is one

¹⁶ These accounts can also be disaggregated depending upon the availability of data and the purpose of the study.

additional asset consisting of all other financial flows. A statistical discrepancy is also present due to the statistical discrepancy in the flow of funds data.

The savings of different institutions and the contribution of each of them to the gross fixed capital formation are the buffer variable in this social accounting matrix. Basically, these are the most apparent variables linking the real side to the financial side of the current social accounting matrix.

Table 4.1 shows that the savings of households and liabilities in the form of loans from domestic institutions (row 21) are spent on investment in different goods together with deposits, holding of currencies, bonds, and lending to other sectors. The non financial firms' (row 22) issuance of bonds, loans from domestic and foreign sources together with their savings is used for domestic physical investment, currency holding and lending to other sectors. Non financial firms are also holding government securities and banking systems' bonds and making deposits with the banking systems.

The banking system liabilities (row 23) are deposits in its accounts, issuance of bonds and credits from other sectors. Their assets include investment in physical capital, holding of domestic and foreign currencies, deposits in other sectors' accounts, holding of bonds and lending to all other institutions except central bank.

The government liabilities (row 24) are issuance of currency, deposits in their accounts, and issuance of bonds and borrowing from domestic and foreign institutions. The government assets are investment in different goods, holding of central bank's currency, deposits in the central bank, banking system, and foreign banks and lending to other sectors. Government is also holding bonds of banking systems, non financial firms and rest of the world.

The central bank liabilities (row 25) are only issuance of currency and deposits in its accounts. On the asset side central bank is holding physical and financial assets. Their financial assets are holding of government currency, deposits in foreign banks, holding of government securities and lending to other sectors.

The rest of the world savings and other liabilities (row 26) in the form of foreign currency, deposits in the foreign banks, issuance of foreign bonds and lending from domestic sectors are used for only domestic financial assets. This includes deposits in the central bank and banking system, holding of government, banking system and non financial firms' bonds. The rest of the world are also lending to domestic institutions excepts households and central banks.

5. Disaggregated Financial SAM for Pakistan

The data of the disaggregated financial social accounting matrix for Pakistan for the year 1999/2000 is shown in the Table 5.1 in appendix-A. The institutions savings and borrowing are financing their physical and financial investments. We have derived Table 5.2 to give a clear picture of the financial asset and liability flows of institutions during the year 1999/2000. It is clear from the table that non financial firms, banking systems and government are deficit institutions, while others are surplus institutions.

Table 5.2 shows that households were holding most of their assets in the form of financial assets. In the total assets of Rs. 379449 million, households were holding Rs. 116582 in the form of physical assets. Within the financial assets of Rs. 267765 million, households' were holding Rs. 48600 million in the form of currencies, Rs. 59297 million in the form of deposits and Rs. 97617 million in the of bonds. Households were giving loans of only Rs.1847 million and Rs. 60404 million was in the form of other financial flows. The liabilities of the households were only loans from all other institutions except rest of the world.

In the asset portfolio of the non-financial firms, lending to other institutions (Rs. 16750 million) were the major item followed by holding of banking system's bonds (Rs. 1248 million) and deposits in the banking system (Rs. 1192 million). On the liability side, out of total Rs. 47161 million liability flows, Rs. 24916 was issuance of bonds, Rs. 2200 million was loans from foreign sector and Rs. 1886 million was loans from the households. It is worth to note that non financial firms reduced their borrowing from the banking system by Rs. 6775 million and government by Rs. 92 million during the year 1999/2000.

The major asset flows of the banking system shows lending of Rs. 57376 million to other sectors, deposit of Rs. 70391 million in the central bank and Rs. 10000 million in the foreign banks during 1999/2000. The major liabilities were deposits in the banking systems (Rs. 29225 million) and bonds of the banking system (Rs. 6588 million). The borrowing of the banking system was Rs. 6186 million from the central bank and Rs. 4081 million from the foreign banks during the year 1999/2000.

The government was the major investor in physical assets during 1999/2000. In the financial assets of the government, the main items were deposits in the central bank (Rs. 75550 million) followed by other financial flows (Rs. 66737 million) during the year 1999/2000. Among government liabilities, the main items were government bonds (Rs. 148551 million) followed by borrowing from the banking system (Rs. 53716), foreign sector (Rs. 26367 million) and the central bank (Rs.16615 million). Government liability also included

deposits in its account (Rs. 18858 million), and other financial flows (Rs. 99961 million) during the year 1999/2000.

The central bank major liability items were deposits in its account (Rs. 142206 million) and issuance of currency (Rs. 68433 million). On the asset side, central bank was holding government bonds (Rs. 191459 million), and giving loans to other institutions (Rs. 23061 million) besides holding of banking systems' bonds (Rs. 172 million) and other financial assets (Rs. 5729 million) during 1999/2000.

The rest of the world assets were mainly lending to the domestic economic institutions (Rs. 32648 million), holding of government's bonds (Rs. 19180 million), firms' bonds (Rs. 6600 million) and banking system's bonds (Rs. 1028 million) during the year 1999/2000. The rest of the world reduced their deposits in the banking system (Rs. 6761 million) and in the central bank (Rs. 6019 million) during the year 1999/2000. The liabilities of the rest of the world were mainly borrowing from the non financial firms (Rs. 15833 million) banking systems (Rs. 6583) and deposits in the foreign banks (Rs. 2295 million).

6. Conclusion and Future Research

This paper utilizes the latest supply and use table (1999/2000) and flow of funds data (1999/2000) to construct the first detailed financial social accounting matrix for Pakistan for the year 1999/2000. The financial SAM construction process has been challenging because it has had to rely on diverse data sources of varying quality. Hence, prudent 'common sense' assumptions have been made to balance the financial SAM. The resultant financial SAM seems to be a reasonable reflection of the underlying real and financial structure of Pakistan's economy and, therefore, applicable to any modeling analysis.

The current financial SAM should be seen as a first step in the direction of building a series of different disaggregated SAMs. During the disaggregation process the aggregated cell entries serves as control total for the various sub matrices. There are several ways to disaggregate current SAM. Activity account can further be disaggregated to represent more detail of industries. Similarly, commodity account can be disaggregated to represent greater range of goods and services. Factor accounts can be distinguished further to land, natural resources, labor and capital and to further differentiate among them such as types of labor (urban, rural, skilled, and unskilled); similarly several types of capital and land can also be used in the disaggregated SAM. In the institutions accounts, government can be disaggregated into federal, provincial and local; banking

systems into commercial banks, and non bank institutions; and households can be classified according to the level of income, occupation, education and location. The rest of the world account can also be disaggregated into different regions, with economic, political or geographical subdivisions. Furthermore, financial accounts can also be disaggregated to include more details of the flows of funds. All these disaggregations depend on the availability of data and the nature of the study undertaken.

While SAM constitutes a powerful tool for data analysis, their limitations have to be kept in mind. First, a SAM only provides a snapshot for a particular year, which may not necessarily reflect characteristics of the economy if an exogenous shock hit the economy in that year. Second, due to lags in data collection (particularly, input output table and flow of funds data) SAMs often are not up to date. Finally, a SAM cannot readily be used as a tool for policy analysis. In order to analyze how the economy works and to forecast the effects of economic policies, more is needed than just a static image such as SAM. A general equilibrium model such as Computable General Equilibrium (CGE) model is required to perform such comprehensive policy analysis. Nevertheless, SAM is a useful framework for preparing consistent, multi-sectoral economic data that integrates national income, input output, flow of funds, and foreign trade statistics into a comprehensive and consistent data set.

In addition to provide a description of the structure of an economy, a SAM can be used for a multiplier analysis. It can be made to show how an exogenous change would affect endogenous accounts, if the structure of the SAM remains unchanged. In a closed economy with little excess capacity, such analysis is of limited interest due to changes in price and scarcity of factors of production. However, in an open economy with excess capacity and high level of unemployment, such multiplier analysis can give useful insights of the effects of changes in final demand on industrial production and also about the backward and forward linkages among industries. Hence, our next step would be to utilize the current financial SAM for multiplier analysis before we move to a financial CGE model that overcomes the most obvious weakness of the multiplier technique, which is based on price rigidities and excess capacities.

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Appendix-A

Table 2.1: Structure of the Aggregated Financial Social Accounting Matrix

		Activities						Comodities						Factors		Current Account of Institutions						Capital Account of Institutions						
		AGR	MNQ	MAN	EGW	CON	OTS	AGR	MNQ	MAN	EGW	CON	OTS	L	K	HHD	FIRM	BANK	GOVT	R O W	HHD	FIRM	BANK	GOVT	R O W	FF	Total	
		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	
1	AGR: Agriculture							DSij	DSij	DSij	DSij	DSij	DSij							EXPi							GOi	
2	MNQ: Mining & Quarrying							DSij	DSij	DSij	DSij	DSij	DSij							EXPi							GOi	
3	MAN: Manufacturing							DSij	DSij	DSij	DSij	DSij	DSij							EXPi							GOi	
4	EGW: Electricity, Gas & Water							DSij	DSij	DSij	DSij	DSij	DSij							EXPi							GOi	
5	CON: Construction							DSij	DSij	DSij	DSij	DSij	DSij							EXPi							GOi	
6	OTS: Other sectors							DSij	DSij	DSij	DSij	DSij	DSij							EXPi							GOi	
7	AGR: Agriculture	IDij	IDij	IDij	IDij	IDij	IDij									HCEi			GCEi		INVih	INVif	INVib	INVig			TDi	
8	MNQ: Mining & Quarrying	IDij	IDij	IDij	IDij	IDij	IDij									HCEi			GCEi		INVih	INVif	INVib	INVig			TDi	
9	MAN: Manufacturing	IDij	IDij	IDij	IDij	IDij	IDij									HCEi			GCEi		INVih	INVif	INVib	INVig			TDi	
10	EGW: Electricity, Gas & Water	IDij	IDij	IDij	IDij	IDij	IDij									HCEi			GCEi		INVih	INVif	INVib	INVig			TDi	
11	CON: Construction	IDij	IDij	IDij	IDij	IDij	IDij									HCEi			GCEi		INVih	INVif	INVib	INVig			TDi	
12	OTS: Other sectors	IDij	IDij	IDij	IDij	IDij	IDij									HCEi			GCEi		INVih	INVif	INVib	INVig			TDi	
13	L: Labour	WAj	WAj	WAj	WAj	WAj	WAj																				TYi	
14	K: Capital	RKj	RKj	RKj	RKj	RKj	RKj																				TYk	
15	h: Households													WA	RKh		TRhf		TRhg	TRhw							TYh	
16	f: Non-Financial Firms														RKf				TRfg								TYf	
17	b: Banking system														RKb												TYb	
18	g: Government	TOPj	TOPj	TOPj	TOPj	TOPj	TOPj	TOMj	TOMj	TOMj	TOMj	TOMj	TOMj			TOYgh	TOYgf			TRgw							TYg	
19	w: Rest of the world							IMPj	IMPj	IMPj	IMPj	IMPj	IMPj				TRwf										TYw	
20	h: Households															SAVh										FLh	TLh	
21	f: Non-Financail Firms																SAVf									FLf	TLf	
22	b: Banking system																	SAVb								FLb	TLb	
23	g: Government																		SAVg							FLg	TLg	
24	w: Rest of the world																			SAVw						FLw	TLw	
25	FF: Financial Flows																				FAh	FAf	FAb	FAg	FAw		TFA	
26	Total	COP	COP	COP	COP	COP	COP	TSj	TSj	TSj	TSj	TSj	TSj	TEi	TEk	TEh	TEf	TEb	TEg	TEw	TAh	TAf	Tab	TAq	TAw	TFL		

Source: Authors' construction

Table 3.1: Aggregated Financial Social Accounting Matrix for Pakistan 1999/2000

(Rs. Million)

	Activities						Comodities						Factors		Current Account of Institutions					Capital Account of Institutions					FF	Total
	AGR	MNQ	MAN	EGW	CON	OTS	AGR	MNQ	MAN	EGW	CON	OTS	L	K	HHD	FIRM	BANK	GOVT	R O W	HHD	FIRM	BANK	GOVT	R O W		
	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
1 AGR: Agriculture							1245972	0	0	0	0	13140							19966							1279078
2 MNQ: Mining & Quarrying							0	67793	0	0	0	8300							4070							80163
3 MAN: Manufacturing							11731	203	1869989	92	1696	2450							471619							2357780
4 EGW: Electricity, Gas & Water							0	0	0	356542	0	0							0							356542
5 CON: Construction							0	0	0	0	256192	0							0							256192
6 OTS: Other sectors							0	0	0	253198	0	4945905							0							5199103
7 AGR: Agriculture	289751	0	99233	0	3820	261492									584651			0		13898	7991	3308	34883			1299027
8 MNQ: Mining & Quarrying	8	1796	9609	120779	25335	25064									44589			0		3263	1876	777	8189			241284
9 MAN: Manufacturing	66667	12950	120139	4535	115742	1144528									736950			0		20783	11950	4947	52165			2291356
10 EGW: Electricity, Gas & Water	14852	0	333207	112366	3825	13514									83478			0		11240	6463	2675	28212			609832
11 CON: Construction	3123	1178	1649	0	25267	185383									0			0		9564	5499	2276	24005			257944
12 OTS: Other sectors	97035	10192	1055606	12193	36028	2255130									955170			351624		57834	33253	13766	145161			5022993
13 L: Labour	105693	0	85432	7340	39203	285408																				523076
14 K: Capital	670952	42486	591192	98891	3509	962246																				2369276
15 h: Households													523076	1972476		173110		436	128893							2797991
16 f: Non-Financial Firms														379449				2295								381744
17 b: Banking system														17351												17351
18 g: Government	30997	11560	61713	439	3463	66339	1301	2726	52548	0	0	23729			13705	98848			47940							415308
19 w: Rest of the world							40023	170562	368819	0	56	29469				74430										683359
20 h: Households															379449										4898	384347
21 f: Non-Financial Firms																35356									47161	82517
22 b: Banking system																	17351								268267	285618
23 g: Government																		60953							364108	425061
24 w: Rest of the world																			10871						11921	22792
25 FF: Financial Flows																				267765	15485	257868	132445	22792		696355
26 Total	1279078	80163	2357780	356542	256192	5199103	1299027	241284	2291356	609832	257944	5022993	523076	2369276	2797991	381744	17351	415308	683359	384347	82517	285618	425061	22792	696355	

Source: Authors' calculations

Table 4.1a: Structure of the Disaggregated Financial Social Accounting Matrix

		Activities						Comodities						Factors		Current Account of Institutions						Capital Account of Instt.			
		AGR	MNQ	MAN	EGW	CON	OTS	AGR	MNQ	MAN	EGW	CON	OTS	L	K	HHD	FIRM	BANS	GOVT	CENB	ROW	HHD	FIRM	BANS	GOVT
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	AGR							DSij	DSij	DSij	DSij	DSij	DSij								EXPI				
2	MNQ							DSij	DSij	DSij	DSij	DSij	DSij								EXPI				
3	MAN							DSij	DSij	DSij	DSij	DSij	DSij								EXPI				
4	EGW							DSij	DSij	DSij	DSij	DSij	DSij								EXPI				
5	CON							DSij	DSij	DSij	DSij	DSij	DSij								EXPI				
6	OTS							DSij	DSij	DSij	DSij	DSij	DSij								EXPI				
7	AGR	IDij	IDij	IDij	IDij	IDij	IDij									HCEi			GCEi			INVih	INVif	INVib	INVig
8	MNQ	IDij	IDij	IDij	IDij	IDij	IDij									HCEi			GCEi			INVih	INVif	INVib	INVig
9	MAN	IDij	IDij	IDij	IDij	IDij	IDij									HCEi			GCEi			INVih	INVif	INVib	INVig
10	EGW	IDij	IDij	IDij	IDij	IDij	IDij									HCEi			GCEi			INVih	INVif	INVib	INVig
11	CON	IDij	IDij	IDij	IDij	IDij	IDij									HCEi			GCEi			INVih	INVif	INVib	INVig
12	OTS	IDij	IDij	IDij	IDij	IDij	IDij									HCEi			GCEi			INVih	INVif	INVib	INVig
13	L	WAj	WAj	WAj	WAj	WAj	WAj																		
14	K	RKj	RKj	RKj	RKj	RKj	RKj																		
15	HHD													WA	RKh		TRhf		TRhg		TRhw				
16	FIRM													RKf				TRfg							
17	BANS													RKb											
18	GOVT	TOPj	TOPj	TOPj	TOPj	TOPj	TOPj	TOMj	TOMj	TOMj	TOMj	TOMj	TOMj			TOYgh	TOYgf				TRgw				
19	CENB													RKc											
20	ROW							IMPj	IMPj	IMPj	IMPj	IMPj	IMPj				TRwf								
21	HHD															SAVh									
22	FIRM																SAVi								
23	BANS																	SAVb							
24	GOVT																		SAVg						
25	CENB																			SAVc					
26	ROW																				SAVw				
27	CURg																					CURgh			
28	CURc																					CURch	CURcf	CURcb	CURcg
29	CURw																							CURwb	
30	DEPg																					DEPgh		DEPgb	
31	DEPc																					DEPch		DEPcb	DEPcg
32	DEPb																					DEPbh	DEPbf		DEPbg
33	DEPw																							DEPwb	DEPwg
34	BONg																					BONgh	BONgf	BONgb	
35	BONb																					BONbh	BONbf		BONbg
36	BONf																					BONfh		BONfb	BONfg
37	BONw																							BONwb	BONwg
38	LONg																								LONg
39	LONc																								
40	LONb																							LONb	
41	LONf																						LONf		
42	LONh																					LONh			
43	LONw																								
44	OTH																					OTHah	OTHaf	OTHab	OTHag
45	SD																								
46	Total	COPj	COPj	COPj	COPj	COPj	COPj	TSj	TSj	TSj	TSj	TSj	TSj	TEi	TEk	TEh	TEf	TEb	TEg	TEc	TEw	TAh	TAf	TAb	TAg

Source: Authors' construction

Table 4.1b: Structure of the Disaggregated Financial Social Accounting Matrix

[illegible]

Source: Authors' construction

Table 5.1a: Disaggregated Financial Social Accounting Matrix for Pakistan 1999/2000

		Activities						Comodities						Factors		Current Account	
		AGR	MNQ	MAN	EGW	CON	OTS	AGR	MNQ	MAN	EGW	CON	OTS	Labour	Capital	HHD	FIRM
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	AGR							1245972	0	0	0	0	13140				
2	MNQ							0	67793	0	0	0	8300				
3	MAN							11731	203	1869989	92	1696	2450				
4	EGW							0	0	0	356542	0	0				
5	CON							0	0	0	0	256192	0				
6	OTS							0	0	0	253198	0	4945905				
7	AGR	289751	0	99233	0	3820	261492									584651	
8	MNQ	8	1796	9609	120779	25335	25064									44589	
9	MAN	66667	12950	120139	4535	115742	1144528									736950	
10	EGW	14852	0	333207	112366	3825	13514									83478	
11	CON	3123	1178	1649	0	25267	185383									0	
12	OTS	97035	10192	1055606	12193	36028	2255130									955170	
13	L	105693	0	85432	7340	39203	285408										
14	K	670952	42486	591192	98891	3509	962246										
15	HHD													523076	1972476		173110
16	FIRM														379449		
17	BANS														8879		
18	GOVT	30997	11560	61713	439	3463	66339	1301	2726	52548	0	0	23729			13705	98848
19	CENB														8472		
20	ROW							40023	170562	368819	0	56	29469				74430
21	HHD															379449	
22	FIRM																35356
23	BANS																
24	GOVT																
25	CENB																
26	ROW																
27	CURg																
28	CURc																
29	CURw																
30	DEPg																
31	DEPc																
32	DEPb																
33	DEPw																
34	BONg																
35	BONb																
36	BONf																
37	BONw																
38	LONg																
39	LONc																
40	LONb																
41	LONf																
42	LONh																
43	LONw																
44	OTH																
45	SD																
46	Total	1279078	80163	2357780	356542	256192	5199103	1299027	241284	2291356	609832	257944	5022993	523076	2369276	2797991	381744

Source: Authors' Calculations

Table 5.1b: Disaggregated Financial Social Accounting Matrix for Pakistan 1999/2000

Current Account of Institutions					Capital Account of Institutions						Financial Flows						
	BANS	GOVT	CENB	ROW	HHD	FIRM	BANS	GOVT	CENB	ROW	CURg	CURc	CURw	DEPg	DEPc	DEPb	DEPw
	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
1 AGR				19966													
2 MNQ				4070													
3 MAN				471619													
4 EGW				0													
5 CON				0													
6 OTS																	
7 AGR		0			13898	7991	3319	34883	-11								
8 MNQ		0			3263	1876	779	8189	-3								
9 MAN		0			20783	11950	4963	52165	-16								
10 EGW		0			11240	6463	2684	28212	-9								
11 CON		0			9564	5499	2284	24005	-7								
12 OTS		351624			57834	33253	13811	145161	-45								
13 L																	
14 K																	
15 HHD		436		128893													
16 FIRM		2295															
17 BANS																	
18 GOVT				47940													
19 CENB																	
20 ROW																	
21 HHD																	
22 FIRM																	
23 BANS	8879															29225	
24 GOVT		60953									41			18858			
25 CENB			8472									68433			142206		
26 ROW				10871									-2681				2295
27 CURg					125				-84								
28 CURc					48475	36	20500	-578									
29 CURw							-2681										
30 DEPg					15049		675										
31 DEPc					197		70391	75550	-6019								
32 DEPb					44051	1192		-9257	-6761								
33 DEPw							10000	672	-8327								
34 BONg					85433	835	-98681		191459	19180							
35 BONb					2926	1248		530	172	1028							
36 BONf					9258		8258	800		6600							
37 BONw							-358	-47	-10297								
38 LONg								-1962									
39 LONc									23061								
40 LONb							57376										
41 LONf						16750											
42 LONh					1847												
43 LONw										32648							
44 OTH					60404	-4576	-9325	66737	5729	-23884							
45 SD																	
46 Total	8879	415308	8472	683359	384347	82517	83996	425061	201622.14	22792	41	68433	-2681	18858	142206	29225	2295

Source: Authors' Calculations

Table 5.1c: Disaggregated Financial Social Accounting Matrix for Pakistan 1999/2000

Financial Flows														
		BONg	BONb	BONf	BONw	LONg	LONc	LONb	LONf	LONh	LONw	OTH	SD	Total
		34	35	36	37	38	39	40	41	42	43	44	45	46
1	AGR													1279078
2	MNQ													80163
3	MAN													2357780
4	EGW													356542
5	CON													256192
6	OTS													5199103
7	AGR													1299027
8	MNQ													241284
9	MAN													2291356
10	EGW													609832
11	CON													257944
12	OTS													5022993
13	L													523076
14	K													2369276
15	HHD													2797991
16	FIRM													381744
17	BANS													8879
18	GOVT													415308
19	CENB													8472
20	ROW													683359
21	HHD					-100	260	3852	886			0		384347
22	FIRM			24916		-92		-6775		1886	2200	25026		82517
23	BANS		6588			-1616	6186		32	-39	4081	30660		83996
24	GOVT	148551					16615	53716	-1		26367	99961		425061
25	CENB											-17489		201622
26	ROW				-10051	-154		6583	15833			96		22792
27	CURg													41
28	CURc													68433
29	CURw													-2681
30	DEPg												3134	18858
31	DEPc												2087	142206
32	DEPb													29225
33	DEPw												-50	2295
34	BONg												-49675	148551
35	BONb												684	6588
36	BONf													24916
37	BONw												651	-10051
38	LONg													-1962
39	LONc													23061
40	LONb													57376
41	LONf													16750
42	LONh													1847
43	LONw													32648
44	OTH												43169	138254
45	SD													0
46	Total	148551	6588	24916	-10051	-1962	23061	57376	16750	1847	32648	138254	0	

Source: Authors' Calculations

Table 5.2: Asset and Liability Flows of Institutions during 1999/2000

	Households		Non Financial Firms		Banking system		Government		Central Bank		Rest of the world	
	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
PHYSICAL INVESTMENT												
Agriculture	13898		7991		3319		34883		-11			
Mining & Quarrying	3263		1876		779		8189		-3			
Manufacturing	20783		11950		4963		52165		-16			
Electricity, Gas & Water	11240		6463		2684		28212		-9			
Construction	9564		5499		2284		24005		-7			
Other sectors	57834		33253		13811		145161		-45			
Sub-total	116582		67032		27841		292616		-91			
FINANCIAL INVESTMENT												
Government Currency	125							41	-84			
Central Bank Currency	48475		36		20500		-578			68433		
Foreign Currency					-2681							-2681
Deposits in Government A/C	15049				675			18858				
Deposits in Central Bank	197				70391		75550			142206	-6019	
Deposits in Banking System	44051		1192			29225	-9257				-6761	
Deposits in Foreign Banks					10000		672		-8327			2295
Government Bonds	85433		835		-98681			148551	191459		19180	
Banking System Bonds	2926		1248			6588	530		172		1028	
Firms Bonds	9258			24916	8258		800				6600	
Foreign Bonds					-358		-47		-10297			-10051
Government Loans		-100		-92		-1616	-1962					-154
Central Bank Loans		260				6186		16615	23061			
Banking System Loans		3852		-6775	57376			53716				6583
Firms Loans		886	16750			32		-1				15833
Household Loans	1847			1886		-39						
Foreign Sector Loans				2200		4081		26367			32648	
Other financial flows	60404		-4576	25026	-9325	30660	66737	99961	5729	-17489	-23884	96
Sub-total	267765	4898	15485	47161	56155	75117	132445	364108	201713	193150	22792	11921
Financial Assets - Liabilities	262867		-31676		-18962		-231663		8563		10871	
Total Assets (Physical+Financial)	379449		35356		8879		60953		8472		10871	

Source: Authors' calculations

Appendix-B: Description of Notations

Notation	Description
AGR	Agriculture
A	Assets
BON	Bonds
b (BANK)	Banking system
COP	Cost of production
c (CENB)	Central bank
CON	Construction
CUR	Currency
DEP	Deposits
DS	Domestic supply/sale
EGW	Electricity, Gas and Water
EXP	Exports
FF	Financial flows
FA	Financial assets
FL	Financial liabilities
f (FIRM)	Non-financial firms
g (GOVT)	Government
GO	Gross output
GCE	Government consumption expenditure
h (HHD)	Households
HCE	Household consumption expenditure
i, j = 1,2,.....6	Sectors/commodities
IMP	Imports
ID	Intermediate input demand/supply
INV	Investment
K	Capital
L	Labor
L	Liability
LON	Loans
MNQ	Mining and Quarrying
MAN	Manufacturing
OTS	Other sectors
OTH	Other financial flows
RK	Rent
SAV	Savings
SD	Statistical discrepancy
TOP	Tax on production
TOY	Tax on income
TOM	Tax on imports
TS	Total supply
TD	Total demand
TR	Transfer payments
TE	Total expenditure
TY	Total income
TA	Total assets
TL	Total liabilities
WA	Wages
w (ROW)	Rest of the world