

CHAPTER 6

A DESCRIPTION AND AN ANALYSIS OF THE 1993/94 SOCIAL ACCOUNTING MATRIX (SAM) FOR BOTSWANA

6.1 Introduction

This chapter describes the Social Accounting Matrix (SAM) of Botswana for 1993/94. Besides providing information about this macro-SAM, the chapter indicates the various national and sub-accounts of Botswana and the linkages between them. As indicated in Chapter 5, a SAM provides a comprehensive and consistent database regarding the circular flow of income and expenditure in an economy in a given period of time.

“The utility of SAMs is that they can provide a comprehensive and consistent record of the interrelationships of an economy at the level of individual production sectors, factors, and general public and foreign institutions. They can be used to disaggregate the macroeconomic accounts and they can reconcile these with the economy’s input-output accounts” (Francois and Reinert, 1997, p.95). A SAM also provides information about the structure of the economy as well as on the distribution of income among the various factor groups and institutions.

Before a detailed description of Botswana’s 1993/94 SAM is offered, one should mention that since her independence in 1966, Botswana has produced seven SAMs. The first SAM was published in 1974/75. The 1996/97 SAM, the latest has been published. As is the international and standard practice, SAMs for Botswana cover principal accounts such as factors, households/institutions, activity/production, commodities, capital and the rest of the world. Rows represent income received by an account while columns cover expenditure for the same. Conventionally, for any SAM, “receipts must equal expenditure for each and every account”, (McDonald *et al.*, 1998, p.93).

6.2 Justification for and the description of Botswana's 1993/94 SAM

The 1993/94 SAM was selected for this study because it represented a normal performance of agricultural sector and the aggregate economy (mining, manufacturing, food processing, tourism, finance, and so on). Specifically, the rainfall season during the 1993/94 season was normal in respect of the average area planted while the conditions of livestock, grazing and access to water were generally also normal. Agricultural output during 1993/94 was also normal and therefore representative of the country's average annual performance (Agricultural Statistics, 1996). With respect to the aggregate economy, the 1996/97 SAM, the latest to be published, did not differ markedly from the 1993/94 SAM. In particular, GDP sectoral contributions were almost similar between the two periods, implying very minimal structural differences. The diamond-led economy is still dominant in the two periods/SAMs followed by retail, restaurants and hotels (NDP 9, MFDP, 2003). As this study is also concerned about how household food security could be affected by international trade liberalization, it is also worth noting that both the 1993/94 SAM and the 1996/97 SAM relied on the 1993/94 HIES. The use of the 1993/94 HIES by both SAMs means household level characteristics are similar. In addition, since Botswana and her households are also affected by HIV/AIDS, a study on the macro-impact of the epidemic found that there was markedly very little difference between the two periods as the intensity of the scourge started after 1996 (UNDP, 2000). It is estimated that for adults it takes at least 10 years for the HIV infection to lead to death (UNDP, 2000).

In order to construct the 1993/94 SAM, data had already been compiled by CSO from national accounts, household income and expenditure, farm/agricultural, consumer price, industry and labour surveys. As remarked earlier, to produce this data set is time-consuming and costly, and requires high-quality standards in order for a SAM to provide consistent and comprehensive information of the kind described above.

The 1993/94 SAM was reorganized and reduced. The original SAM had about 150 rows and an equal number of columns, i.e. a 150 x 150 structure. To carry out this investigation the numbers of rows and columns were reduced equally to 59, that is, 59 x 59. In this reduced 1993/94 SAM, commodities and activities have been merged into one-to-one mapping so that each activity only produces one commodity. As a result of merging the activity and commodity account into a one-to-one mapping, the interpretation of the columns and rows is the same. That is, income received (in rows) by the activity is the same as that received by the respective commodity under a one-to-one mapping. Similarly, expenditure (in columns) by activities is the same as that of the respective commodity. Table 6.2 illustrates the reduced SAM used in this study.

As a result of the one-to-one mapping, unlike in Figure 5.1 of Chapter 5, Table 6.2 does not specifically show commodity accounts as these have been merged with the activity account. In Table 6.2 purchases by activities (column transactions between activities) constitute the use/absorption matrix while receipts of activities (row transactions) from other activities capture the make matrix. Table 6.2 also covers the key accounts such as factors, households/institutions, government, capital and the rest of the world (like in Figure 5.1) to have a full understanding of income and expenditure interactions in the economy. The decision to merge the commodity account with the activity account based upon one-to one mapping, was made to facilitate in the analysis and interpretation of results. In multi-commodity activity account, it is not possible to isolate the effects of a shock on several products if they all originated from one activity.

Further, following the adoption of a food security policy as part of the country's national agricultural policy in 1990 (see Chapter 2), Botswana also abolished monopoly sorghum imports by the Botswana Agricultural Marketing Board in 1992 so as to allow traders and individuals to obtain this important staple food from international markets. Prior to the adoption of this food security policy

objective, government had embarked upon a policy of basic food self-sufficiency, especially in sorghum, and had also granted a monopoly, to source imports, to BAMB. The choice of the 1993/94 SAM, it is assumed, will also adequately capture the sectoral and macro-economic wide effects of trade liberalization and market access on household food security and Botswana's agricultural sector. A SAM not only shows how income-is redistributed among households, it also shows the structure of the economy. The structure of the economy takes several years to change. Infact the description of Botswana's economy in Chapter 1 shows the dominance of the mineral sector for many years followed by trade, hotels, etc (NDP 9, MFDP, 2003). Further, it is assumed that adequate time has passed by to allow various economic players to adjust to pricing and marketing policies approved by government in 1990 when the food security policy objective was adopted.

6.2.1 Botswana's Macro-SAM

The description and analysis of the 1993/94 SAM will firstly start with a description of the macro-economic SAM for Botswana, and a detailed and disaggregated 1993/94 SAM will follow. A macro-economic SAM provides aggregated income and expenditure interrelationships among the major accounts (factors, households, institutions activities, government, capital and the rest of the world). In this SAM, government has been separated from other institutions such as households, while as a public activity, government has been aggregated under activities in the macro-SAM. The disaggregated SAM will provide further details concerning households/institutions and activities. Table 6.1 illustrates Botswana's macro-SAM in millions of Pula by major account.

Table 6.1: Botswana's 1993/94 Macro-SAM

	EXPENDITURES							
								TOTALS
RECEIPTS								
	FACTORS	HOUSEHOLDS	O/INSTITUTIONS	ACTIVITIES	GOVT	CAPITAL	ROW	
FACTORS	0	0	0	10079.2	0	0	0	10079
HOUSEHOLDS	3801.4	0	0	0	462.4	0	46.8	4311
O/INSTITUTIONS	5763.6	0	0	0	1574.9	0	753.4	8091
ACTIVITIES	0	2660.8	121.6	4292.7	3301.3	1303	5220.7	16779
GOVERNMENT	513	425.3	4590.9	578.7	12461	248.2	1067.3	21058
CAPITAL	0	321.9	2055.5	0	3654.1	0	-1123.2	2853
REST/WORLD	0	903	1323.4	1827.9	1179.1	1301.6	2310.4	7522
TOTALS	10079	4311	8091	16779	21058	2853	8275.4	

Source: CSO, Botswana, 1999.

As is the SAM convention, receipts for each account must equal the expenditure of that account. For instance in Table 6.1, while the receipts or income for the factor account total P 10079 m, equally the total expenditure for the account is the same amount. As indicated in Chapter 5, receipts are recorded in rows while expenditures/outlays are registered in columns.

In general, while households are normally grouped together with other institutions in most SAMs, in this study, however, the two have been separated because the investigation is primarily concerned with individual household food security. Private companies and state-owned organizations/institutions are not the focus of this study, hence their sources of income/receipts and expenditure have been separated from individual households in the macro-SAM. As a result of this reorganization, the macro-SAM contains seven principal accounts, namely, the factors, household, other

institutions, activities, government, capital and the rest of the world. Below follows a brief description of sources of income/receipts and expenditure by principal/major account, following the separation of households from other institutions. The analysis will examine the major sources of income/receipts and expenditure by principal account.

6.2.1.1 Factor Account

Receipts or income for the factors all derive from the principal activity of the macro-SAM shown in Table 6.1. Labour and capital are the only factors covered. This is consistent with economic theory, since activities, including services, employ factors such as labour and capital to produce goods. These activities are shown in Table 6.2, ranging from Traditional Agriculture-cattle/P₁ to Services/P₄₀₋₄₃. Activities employ factors and remunerate/pay them for their services.

Insofar as sources of expenditure are concerned, factors are owned by households and institutions, including government. Hence these are the principal accounts in which the factor account spends its income. Figure 6.1 shows the percentage share of expenditure of the factor account by principal account.

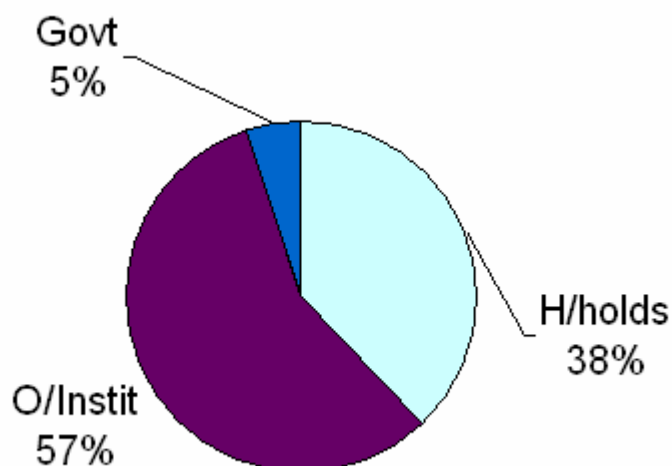


Figure 6.1: Sources of Factor Expenditure by Principal Account

Other institutions, such as the private sector companies (banks, insurance, manufacturing, and the like), account for most of the expenditure by the factor account: about 57 percent of the total such expenditure. Households, which cover both citizen and non-citizen families, received about 38 percent of the total factor income. Government as an owner of factors also received about five percent of the total factor income. The low share of government in total factor expenditure indicates the dominance of the private ownership of the means of production. In countries where the public sector is the main owner of factors of production, government would account for a major share in factor expenditure.

6.2.1.2 Household Account

As owners of labour and capital, households (rural and urban, both citizen and non-citizen) received the bulk of their income (88 per cent) from factors (labour, capital, and so forth) while government, through income transfers, provided the next most important source of income (11 %). Figure 6.2 illustrates the income share of households by major account. Households also received income, partly in the form of remittances, from an insignificant one percent of people outside the country.

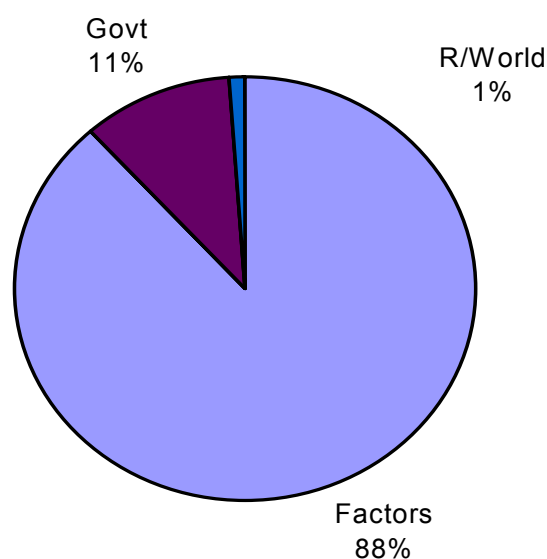


Figure 6.2: Percentage Share of total Household Income by Major Account

As far as household expenditure is concerned, Figure 6.3 shows the shares by principal account. Figure 6.3 shows that households spent about 62 percent of their income purchasing commodities produced by activities.

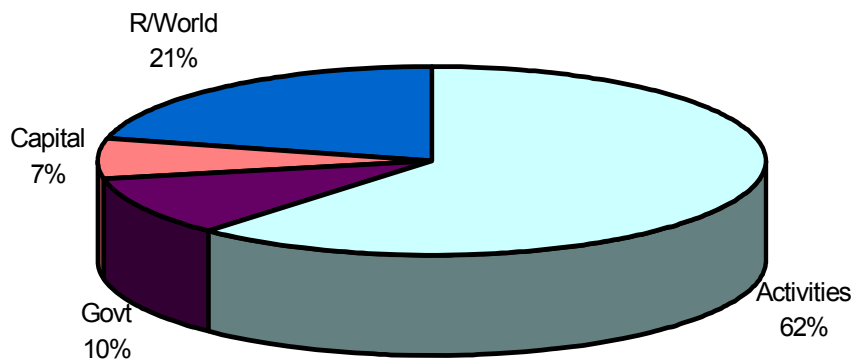


Figure 6.3: Percentage Share of total Household Expenditure

Commodities purchased by households include food, clothing, equipment, machinery and services. Besides purchasing goods from activities, households also spent about 21 percent of their income importing goods from outside or from the rest of the world(R/world).

While domestic household purchases are strongly dominant compared to purchases of the imports (62 % versus 21%), it is, however, still evident that the global market is important for household food security and welfare since the country is an open economy. Further, households paid government about ten percent of their income as tax while families disbursed another seven percent as investment (capital). As a proportion of total household income, investment accounts for a very small portion. Based on these results, it can be safely said that according to the 1993/94 SAM the greater proportion of household income is spent on consumption, as opposed to capital formation.

6.2.1.3 Other Institutions

The category of other institutions, as earlier indicated, covers private companies and state-owned organizations. Figure 6.4 portrays the share of income gained by other institutions by major account.

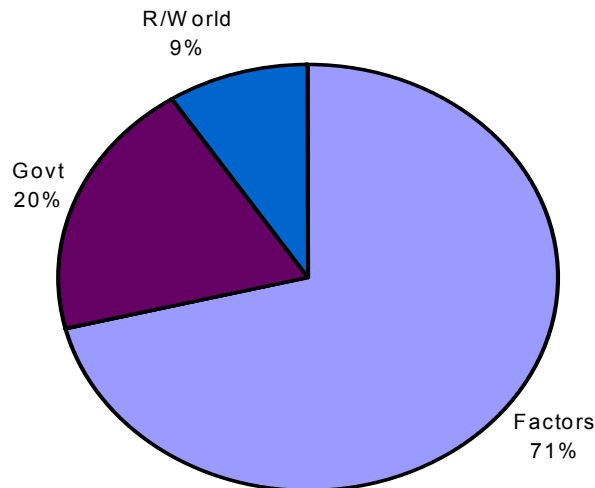


Figure 6.4: Percentage share of Income for Other Institutions

Figure 6.4 illustrates that as with households, factors accounted for most of the income of other institutions: about 71 percent of their income, while government in the form of grants/subsidies provided 20 percent. Some of the institutions benefited from government through financial grants for employment creation and manufacturing. In particular, government provided both labour and capital grants to these institutions. The rest of the world also provided other institutions with additional income worth nine percent of their total receipts during the 1993/94 SAM. Income from the outside world covers royalties, profits, and similar sources.

Other institutions spent their income as indicated in Figure 6.5. As expected, other institutions, a category which covers income-earning private companies in sectors such as minerals and manufacturing, disbursed a significant amount of their income on corporate tax. About 57 percent of their income

was paid to government as tax while 25 percent was used for investment or capital formation. About 16 percent was utilized to import goods and about two percent was used to purchase goods from activities.

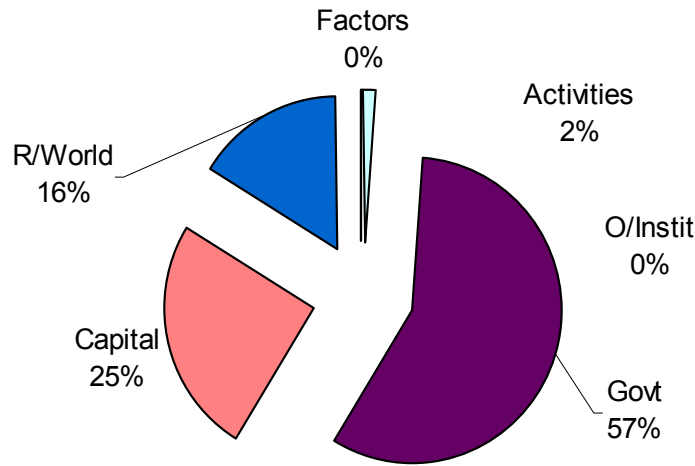


Figure 6.5: Percentage Share of Expenditure for other Institutions

6.2.1.4 Activity Account

The principal activity account received income from several sources. As indicated earlier this account obtains income by selling its goods and services in both the domestic and external markets. Figure 6.6 indicates the percentage share of the activity income by major account.

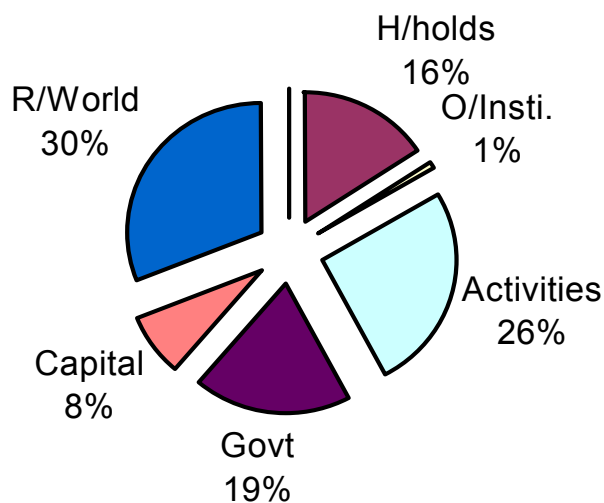


Figure 6.6: Income Sources of the Principal Activity Account

Figure 6.6 illustrates the breakdown of income sources for the principal activity account by major economic players during the 1993/94 SAM. External trade contributed 30 percent of the account's total income through exports commodities, while activities traded among themselves to contribute 26 percent of the principal activity's income. Activities purchase intermediate inputs and services from others and in this way generate income among themselves. Government provided the third largest source of income to the activity account. About 19 percent of the total account's income was derived from government. Government purchases goods and services from productive activities. Households came fourth, accounting for 16 percent of the total activity income/receipts. As households constitute final demand, they purchase commodities (food, clothing and other goods) from activities to meet their consumption requirements. Further, the capital account also purchased goods from activities for the purposes of investment. About eight percent of the activity income stemmed from the capital account. Other institutions contributed only one percent of the activity's total income.

The activity account which as indicated earlier is combined with the commodity account disbursed its income as shown in Figure 6.7. About 60 percent of the activity income was spent on remunerating factors (such as labour and capital). Factors derive their income from activities that engage their services. After expenditure on factors, the activity account spent about 26 percent of its income on purchases between the activities themselves. Purchases among activities themselves include input orders as well as payment for services regarding the production of goods. About 11 percent was used by the activity account to import intermediate inputs while three percent was spent on government taxes. Activities pay sales tax and import duties on inputs to government.

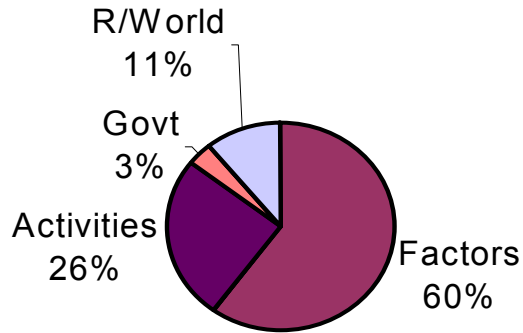


Figure 6.7: Percentage Share of Activity Expenditure by Principal Account

6.2.1.5 Government Account

As far as government receipts are concerned, income was obtained mainly from government itself by the sale of public services. Figure 6.8 illustrates the percentage share of government revenue by principal account.

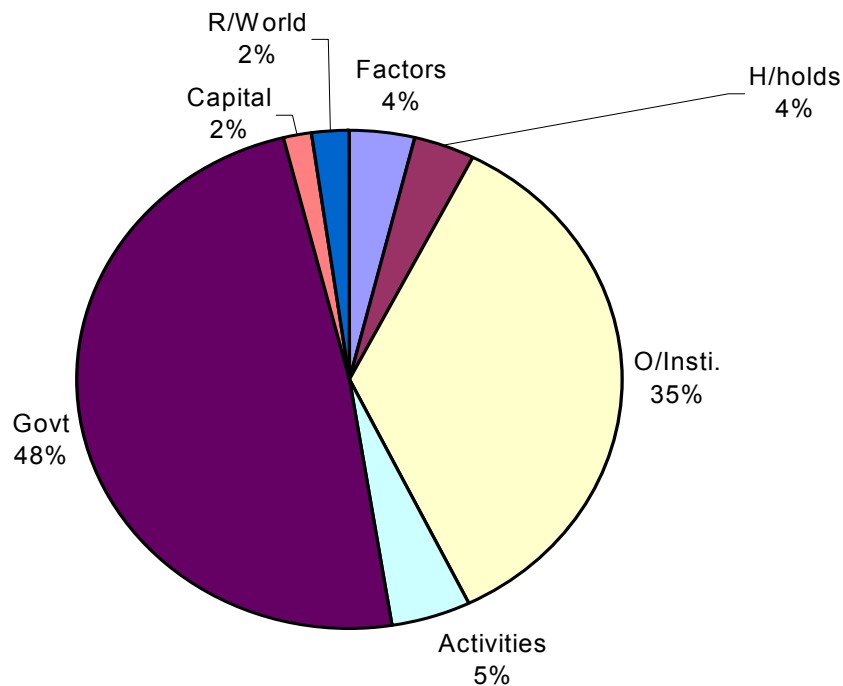


Figure 6.8: Percentage Share of Government Revenue by Principal Account

From figure 6.8, it is evident that almost half of government income was derived from the public institution itself. About 48 percent of government

income during the 1993/94 SAM came from its own organs through the provision of governmental goods and services. As a provider of public goods, government generates its own output, which in turn is consumed largely by itself (1993/94 SAM, CSO, 1999, p.26). The private sector is generally very reluctant to participate in the production of public goods owing to limited exclusion as other agents can freely benefit without investing. The market for government goods is very limited outside government itself, hence the significant income generated from within. Besides government, other institutions accounted for 35 percent of government receipts, by paying corporate taxes. These mainly comprise private companies that include the diamond, manufacturing and service industries (banks, insurance companies, etc). While activities contributed about five percent, households and factors each also accounted for four percent of government income. Activities pay government sales tax as well as duties on imported inputs. Households pay income tax while factors contribute to government revenue by paying tax on capital, in particular. Figure 6.8 also indicates that about two percent of amounts were received from the rest of the world as interest payments on external savings while another two percent represented interest payments on capital invested locally.

As far as government expenditure is concerned, Figure 6.9 illustrates the percentage share by major account.

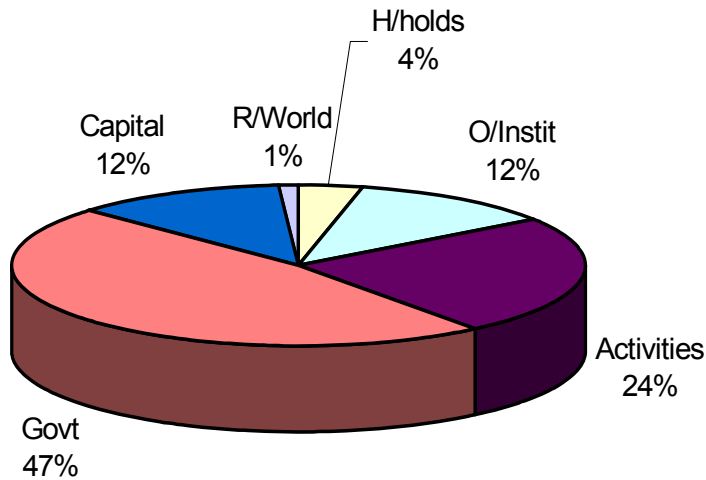


Figure 6.9: Percentage share of Government Expenditure by Major Account

Figure 6.9 indicates that government accounted for most of its own expenditure in the provision of public goods (education, infrastructure, health, and so on). About 47 percent of total government income was spent on public services while 24 percent was used to purchase goods and services from productive activities. About 12 percent each was spent on other institutions and capital. Other institutions received grants/subsidies for manufacturing or employment creation while some funds were used for investment in capital goods (such as equipment and machinery). Households also received about four percent as income transfers from government while one percent of expenditure went on imports. Of late, government expenditure has been increasing owing to the prevailing HIV/AIDS scourge, which could prejudice the development of other important public goods. Already some projects have been shelved pending an improvement in government revenue. Cost-recovery measures by means of increasing fees and reduction/removal of subsidies are being introduced and explored. A broadly based value added tax (VAT) has also been introduced recently in order to diversify and increase public revenues.

6.2.1.6 Capital Account

Regarding the capital account, receipts or income have been obtained from several sources. Income from the capital account constitutes domestic and external savings. Figure 6.10 captures the percentage share of capital receipts/savings by major account.

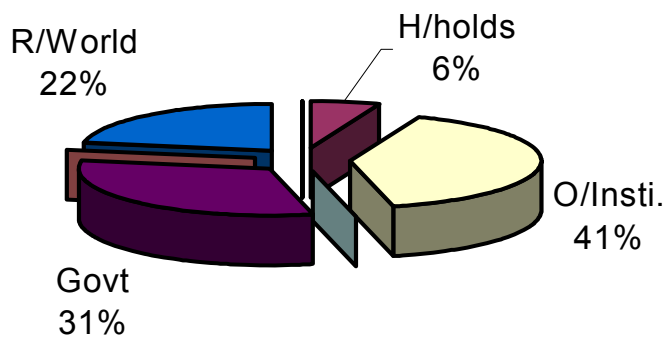


Figure 6.10: Percentage Share of Capital Income by Principal Account

Figure 6.10 portrays the breakdown of capital receipts by major account. Other institutions accounted for 41 percent of savings. These institutions include private and state-owned companies engaged in banking, insurance, diamond, manufacturing and service industries, etc. After these institutions, government comprises the next most important source of savings, accounting for about 31 percent of capital receipts. Additional and unspent funds, mainly from diamonds, account for government savings. The relatively large share of government's contribution to capital income partly shows the limited role in particular, of individual households as well as other institutions in capital mobilization. The rest of the world is the third most important source of capital receipts, accounting for 22 percent. Capital receipts from outside the country constitute foreign capital inflows, which are also critical for economic diversification as well as for enlarging the role of the private sector in the country. Households contributed the remaining six percent of the total capital receipts. Unlike the situation in other developing countries such as those in southeast Asia, where household savings account for at least 20 percent of

total capital income, Botswana is still lagging behind. While efforts are being made to encourage household savings, government has in the meantime played a crucial role in building savings.

Insofar as capital expenditure is concerned, Figure 6.11 provides the breakdown by principal account.

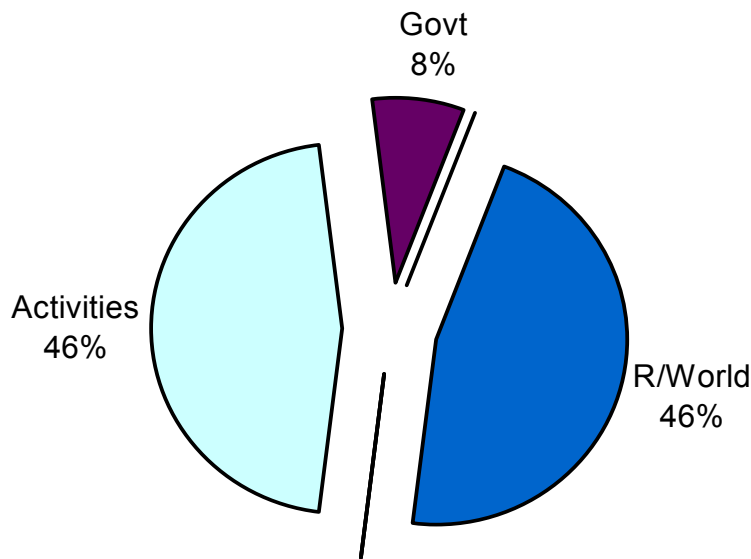


Figure 6.11: Percentage Share of Investment by Principal Account

Imports and activities received most of the capital expenditure. About 46 percent of the total capital expenditure was used to purchase imported goods, for the purposes of investment, while the same percentage was spent on activities. Activities benefited from capital expenditure, as they also require machinery and equipment, etcetera, in order to increase output. Besides payments for imported capital and investment in the activity account, government borrowed about eight percent of capital resources for its own investment. It is worth noting that although government is one of the major sources of savings, in capital expenditure the private sector takes the lead. This could help to promote the development of competitive and sustainable industries.

6.2.1.7 Rest of the World Account

As far as the account for the rest of the world is concerned, several principal accounts contributed income as export earnings. Figure 6.12 indicates the percentage share of export earnings by major account.

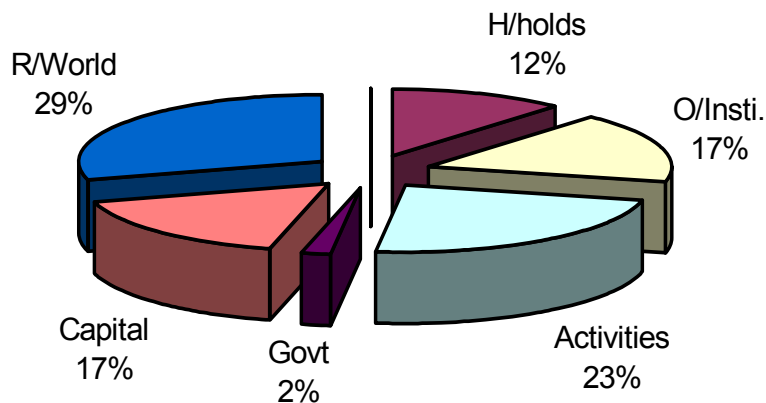


Figure 6.12: Percentage share of Export Earnings by Principal Account

About 29 percent of the income for the rest of the world originated from exports, while activities accounted for 23 percent of total income. Activities import goods as inputs from the rest of the world and in the process contribute income to the outside world. Other institutions and capital each contributed about 17 percent of the income for the rest of the world as import payments. Other institutions cover private companies as well as state-owned organizations. Imports by the capital account and other institutions altogether contributed 34 percent of the income for the rest of the world. Individual households imported goods, which accounted for about 12 percent of the income. Government accounted for the remaining two percent of the income for the rest of the world account.

Regarding expenditure, the rest of the world spent most of its income on activities. Figure 6.13 portrays the breakdown of expenditure incurred by the rest of the world account.

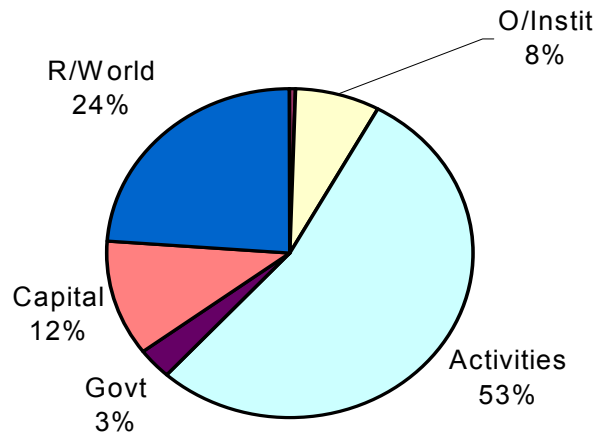


Figure 6.13: Percentage Share of Expenditure of the Rest of the World by Principal Account.

About 53 percent of the total expenditure by the rest of the world comprised payments for commodities exported by activities in Botswana. Consequently these import payments represented export earnings for the country. The rest of the world further spent about 24 percent of its income on paying for imports from other parts of the world. About 12 percent was disbursed as returns to capital (repatriated profits, etc) by the rest of the world, while other institutions benefited by about eight percent from the total expenditure of the rest of the world. This means that other institutions received income from outside the world as grants. The rest of the world also spent about three percent of its total income on government duties or taxes. A very insignificant amount (less than one percent) was spent by the rest of the world as remittances to households in Botswana.

In summary, the foregoing description and analysis of the Macro-SAM has indicated the broader interrelationships between and among the aggregate accounts, as well as offering an illustration of how SAM balances. Further, the Macro-SAM has demonstrated the circular flow of income and expenditure in the economy.

Below is a detailed description and analysis of a disaggregated SAM that will also underscore the common features of circular income and expenditure flows, as well as the overall balancing of the various accounts. Since the focus of this study falls on food security, agriculture and other linkages, including those within and between factors, households, activities and the rest of the world, the following description and analysis of the disaggregated SAM will concentrate on these relationships/linkages. Those activities and other sub-accounts where the income and expenditure relationships with household food security and farming are generally limited or weak will be accorded only a very brief description. The empirical analysis of the linkages will be undertaken in Chapters 7 and 8.

6.2.2 Botswana Micro-SAM

The disaggregated Botswana SAM for this study has been broken down into 59 sub-accounts, which cover the main accounts already described in the Macro-SAM. As the disaggregated SAM contains 59 sub-accounts, there are 59 rows/sub-accounts and 59 columns/sub-accounts. Rows represent income or receipts while columns record expenditures. As a result of this reorganization, this SAM is classified as a 59 x 59. Table 6.2 contains the disaggregated SAM for 1993/94(CSO, 1999).

Before describing the micro-SAM, it is also important to observe that unlike the SAM structure provided in Figure 5.1 of Chapter 5, in Table 6.2 there are no commodity accounts.

Table 6.2 Input-Output SAM for Botswana 1993-4

continued INPUT - OUTPUT - 1993

FACTOR	FACTOR																				HOUSEHOLD												Calculated	Type																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
	F22	F23	F24	F25	F26	F27	F28	F29	F30	F31	F32	F33	F34	F35	F36	F37	F38	F39	F40	F41	F42	F43	F44	F45	F46	F47	F48	F49	F50	F51	F52	F53			F54	F55	F56	F57	F58	F59	F60	F61	F62	F63	F64	F65	F66	F67	F68	F69	F70	F71	F72	F73	F74	F75	F76	F77	F78	F79	F80	F81	F82	F83	F84	F85	F86	F87	F88	F89	F90	F91	F92	F93	F94	F95	F96	F97	F98	F99	F100	F101	F102	F103	F104	F105	F106	F107	F108	F109	F110	F111	F112	F113	F114	F115	F116	F117	F118	F119	F120	F121	F122	F123	F124	F125	F126	F127	F128	F129	F130	F131	F132	F133	F134	F135	F136	F137	F138	F139	F140	F141	F142	F143	F144	F145	F146	F147	F148	F149	F150	F151	F152	F153	F154	F155	F156	F157	F158	F159	F160	F161	F162	F163	F164	F165	F166	F167	F168	F169	F170	F171	F172	F173	F174	F175	F176	F177	F178	F179	F180	F181	F182	F183	F184	F185	F186	F187	F188	F189	F190	F191	F192	F193	F194	F195	F196	F197	F198	F199	F200	F201	F202	F203	F204	F205	F206	F207	F208	F209	F210	F211	F212	F213	F214	F215	F216	F217	F218	F219	F220	F221	F222	F223	F224	F225	F226	F227	F228	F229	F230	F231	F232	F233	F234	F235	F236	F237	F238	F239	F240	F241	F242	F243	F244	F245	F246	F247	F248	F249	F250	F251	F252	F253	F254	F255	F256	F257	F258	F259	F260	F261	F262	F263	F264	F265	F266	F267	F268	F269	F270	F271	F272	F273	F274	F275	F276	F277	F278	F279	F280	F281	F282	F283	F284	F285	F286	F287	F288	F289	F290	F291	F292	F293	F294	F295	F296	F297	F298	F299	F300	F301	F302	F303	F304	F305	F306	F307	F308	F309	F310	F311	F312	F313	F314	F315	F316	F317	F318	F319	F320	F321	F322	F323	F324	F325	F326	F327	F328	F329	F330	F331	F332	F333	F334	F335	F336	F337	F338	F339	F340	F341	F342	F343	F344	F345	F346	F347	F348	F349	F350	F351	F352	F353	F354	F355	F356	F357	F358	F359	F360	F361	F362	F363	F364	F365	F366	F367	F368	F369	F370	F371	F372	F373	F374	F375	F376	F377	F378	F379	F380	F381	F382	F383	F384	F385	F386	F387	F388	F389	F390	F391	F392	F393	F394	F395	F396	F397	F398	F399	F400	F401	F402	F403	F404	F405	F406	F407	F408	F409	F410	F411	F412	F413	F414	F415	F416	F417	F418	F419	F420	F421	F422	F423	F424	F425	F426	F427	F428	F429	F430	F431	F432	F433	F434	F435	F436	F437	F438	F439	F440	F441	F442	F443	F444	F445	F446	F447	F448	F449	F450	F451	F452	F453	F454	F455	F456	F457	F458	F459	F460	F461	F462	F463	F464	F465	F466	F467	F468	F469	F470	F471	F472	F473	F474	F475	F476	F477	F478	F479	F480	F481	F482	F483	F484	F485	F486	F487	F488	F489	F490	F491	F492	F493	F494	F495	F496	F497	F498	F499	F500	F501	F502	F503	F504	F505	F506	F507	F508	F509	F510	F511	F512	F513	F514	F515	F516	F517	F518	F519	F520	F521	F522	F523	F524	F525	F526	F527	F528	F529	F530	F531	F532	F533	F534	F535	F536	F537	F538	F539	F540	F541	F542	F543	F544	F545	F546	F547	F548	F549	F550	F551	F552	F553	F554	F555	F556	F557	F558	F559	F560	F561	F562	F563	F564	F565	F566	F567	F568	F569	F570	F571	F572	F573	F574	F575	F576	F577	F578	F579	F580	F581	F582	F583	F584	F585	F586	F587	F588	F589	F590	F591	F592	F593	F594	F595	F596	F597	F598	F599	F600	F601	F602	F603	F604	F605	F606	F607	F608	F609	F610	F611	F612	F613	F614	F615	F616	F617	F618	F619	F620	F621	F622	F623	F624	F625	F626	F627	F628	F629	F630	F631	F632	F633	F634	F635	F636	F637	F638	F639	F640	F641	F642	F643	F644	F645	F646	F647	F648	F649	F650	F651	F652	F653	F654	F655	F656	F657	F658	F659	F660	F661	F662	F663	F664	F665	F666	F667	F668	F669	F670	F671	F672	F673	F674	F675	F676	F677	F678	F679	F680	F681	F682	F683	F684	F685	F686	F687	F688	F689	F690	F691	F692	F693	F694	F695	F696	F697	F698	F699	F700	F701	F702	F703	F704	F705	F706	F707	F708	F709	F710	F711	F712	F713	F714	F715	F716	F717	F718	F719	F720	F721	F722	F723	F724	F725	F726	F727	F728	F729	F730	F731	F732	F733	F734	F735	F736	F737	F738	F739	F740	F741	F742	F743	F744	F745	F746	F747	F748	F749	F750	F751	F752	F753	F754	F755	F756	F757	F758	F759	F760	F761	F762	F763	F764	F765	F766	F767	F768	F769	F770	F771	F772	F773	F774	F775	F776	F777	F778	F779	F780	F781	F782	F783	F784	F785	F786	F787	F788	F789	F790	F791	F792	F793	F794	F795	F796	F797	F798	F799	F800	F801	F802	F803	F804	F805	F806	F807	F808	F809	F810	F811	F812	F813	F814	F815	F816	F817	F818	F819	F820	F821	F822	F823	F824	F825	F826	F827	F828	F829	F830	F831	F832	F833	F834	F835	F836	F837	F838	F839	F840	F841	F842	F843	F844	F845	F846	F847	F848	F849	F850	F851	F852	F853	F854	F855	F856	F857	F858	F859	F860	F861	F862	F863	F864	F865	F866	F867	F868	F869	F870	F871	F872	F873	F874	F875	F876	F877	F878	F879	F880	F881	F882	F883	F884	F885	F886	F887	F888	F889	F890	F891	F892	F893	F894	F895	F896	F897	F898	F899	F900	F901	F902	F903	F904	F905	F906	F907	F908	F909	F910	F911	F912	F913	F914	F915	F916	F917	F918	F919	F920	F921	F922	F923	F924	F925	F926	F927	F928	F929	F930	F931	F932	F933	F934	F935	F936	F937	F938	F939	F940	F941	F942	F943	F944	F945	F946	F947	F948	F949	F950	F951	F952	F953	F954	F955	F956	F957	F958	F959	F960	F961	F962	F963	F964	F965	F966	F967	F968	F969	F970	F971	F972	F973	F974	F975	F976	F977	F978	F979	F980	F981	F982	F983	F984	F985	F986	F987	F988	F989	F990	F991	F992	F993	F994	F995	F996	F997	F998	F999	F1000	F1001	F1002	F1003	F1004	F1005	F1006	F1007	F1008	F1009	F1010	F1011	F1012	F1013	F1014	F1015	F1016	F1017	F1018	F1019	F1020	F1021	F1022	F1023	F1024	F1025	F1026	F1027	F1028	F1029	F1030	F1031	F1032	F1033	F1034	F1035	F1036	F1037	F1038	F1039	F1040	F1041	F1042	F1043	F1044	F1045	F1046	F1047	F1048	F1049	F1050	F1051	F1052	F1053	F1054	F1055	F1056	F1057	F1058	F1059	F1060	F1061	F1062	F1063	F1064	F1065	F1066	F1067	F1068	F1069	F1070	F1071	F1072	F1073	F1074	F1075	F1076	F1077	F1078	F1079	F1080	F1081	F1082	F1083	F1084	F1085	F1086	F1087	F1088	F1089	F1090	F1091	F1092	F1093	F1094	F1095	F1096	F1097	F1098	F1099	F1100	F1101	F1102	F1103	F1104	F1105	F1106	F1107	F1108	F1109	F1110	F1111	F1112	F1113	F1114	F1115	F1116	F1117	F1118	F1119	F1120	F1121	F1122	F1123	F1124	F1125	F1126	F1127	F1128	F1129	F1130	F1131	F1132	F1133	F1134	F1135	F1136	F1137	F1138	F1139	F1140	F1141	F1142	F1143	F1144	F1145	F1146	F1147	F1148	F1149	F1150	F1151	F1152	F1153	F1154	F1155	F1156	F1157	F1158	F1159	F1160	F1161	F1162	F1163	F1164	F1165	F1166	F1167	F1168	F1169	F1170	F1171	F1172	F1173	F1174	F1175	F1176	F1177	F1178	F1179	F1180	F1181	F1182	F1183	F1184	F1185	F1186	F1187	F1188	F1189	F1190	F1191	F1192	F1193	F1194	F1195	F1196	F1197	F1198	F1199	F1200	F1201	F1202	F1203	F1204	F1205	F1206	F1207	F1208	F1209	F1210	F1211	F1212	F1213	F1214	F1215	F1216	F1217	F1218	F1219	F1220	F1221	F1222	F1223	F1224	F1225	F1226	F1227	F1228	F1229	F1230	F1231	F1232	F1233	F1234	F1235	F1236	F1237	F1238	F1239	F1240	F1241	F1242	F1243	F1244	F1245	F1246	F1247	F1248	F1249	F1250	F1251	F1252	F1253	F1254	F1255	F1256	F1257	F1258	F1259	F1260	F1261	F1262	F1263	F1264	F1265	F1266	F1267	F1268	F1269	F1270	F1271	F1272	F1273	F1274	F1275	F1276	F1277	F1278	F1279	F1280	F1281	F1282	F1283	F1284	F1285	F1286	F1287	F1288	F1289	F1290	F1291	F1292	F1293	F1294	F1295	F1296	F1297	F1298	F1299	F1300	F1301	F1302	F1303	F1304	F1305	F1306	F1307	F1308	F1309	F1310	F1311	F1312	F1313	F1314	F1315	F1316	F1317	F1318	F1319	F1320	F1321	F1322	F1323	F1324	F1325	F1326	F1327	F1328	F1329	F1330	F1331	F1332	F1333	F1334	F1335	F1336	F1337	F1338	F1339	F1340	F1341	F1342	F1343	F1344	F1345	F1346	F1347	F1348	F1349	F1350	F1351	F1352	F1353	F1354	F1355	F1356	F1357	F1358	F1359	F1360	F1361	F1362	F1363	F1364	F1365	F1366	F1367	F1368	F1369	F1370	F1371	F1372	F1373	F1374	F1375	F1376	F1377	F1378	F1379	F1380	F1381	F1382	F1383	F1384	F1385	F1386	F1387	F1388	F1389	F1390	F1391	F1392	F1393	F1394	F1395	F1396	F1397	F1398	F1399	F1400	F1401	F1402	F1403	F1404	F1405	F1406	F1407	F1408	F1409	F1410	F1411	F1412	F1413	F1414	F1415	F1416	F1417	F1418	F1419	F1420	F1421	F1422	F1423	F1424	F1425	F1426	F1427	F1428	F1429	F1430	F1431	F1432	F1433	F1434	F1435	F1436	F1437	F1438	F1439	F1440	F1441	F1442	F1443	F1444	F1445	F1446	F1447	F1448	F1449	F1450	F1451	F1452	F1453	F1454	F1455	F1456	F1457	F1458	F1459	F1460	F1461	F1462	F1463	F1464	F1465	F1466	F1467	F1468	F1469	F1470	F1471	F1472	F1473	F1474	F1475	F1476	F1477	F1478

The detailed description and analysis of Table 6.2 is now presented below.

6.2.2.1 Factor Account

To compile information on “Factor Payments” or value added, several surveys were conducted by CSO in order to generate the 1993/94 SAM. These surveys included Employment, the Census of Manufacturing and Construction and the Census of Production and Distribution (all in 1993) and Household Income and Expenditure for 1992/93 and 1993/94. Data from the National Accounts were also used extensively to construct the 1993/94 SAM.

There are eleven (11) sub-accounts/ sub-matrices under the principal factor account (see Table 6.2):

- F1 - Professional & Technical Employees (citizen),
- F2 - Professional & Technical Employees (non-citizen),
- F3 - Administration & Management Employees (citizen),
- F4 - Administration & Management Employees (non-citizen),
- F5 - Clerical Employees (citizen),
- F6 - Clerical Employees (non-citizen),
- F7 - Skilled Manual Workers (citizen),
- F8 - Skilled Manual Workers (non-citizen),
- F9 - Unskilled Workers,
- F10 - Mixed Income,
- F11 - Gross Operating Surplus.

The first nine sub-matrices represent payments to or income received by employees, F1 to F9. Furthermore, the classification of employee categories is by skill and citizenship, except for employee category F9 where the classification was not based on citizenship, as at the time few unskilled workers who were non-citizens were employed in the economy. However, this

situation may change since Botswana has recently approved a policy to import unskilled workers for sectors such as agriculture.

Of the total factor income of P 10079m, 65 percent of it is dominated by gross operating capital/ F_{11} or returns to owners of capital while the remaining income largely comprises wage income for F_1 to F_9 . Mixed income/ F_{10} accounts for about four percent of total factor income. Figure 6.14 illustrates the main sources of factor income based on a disaggregated 1993/94 SAM.

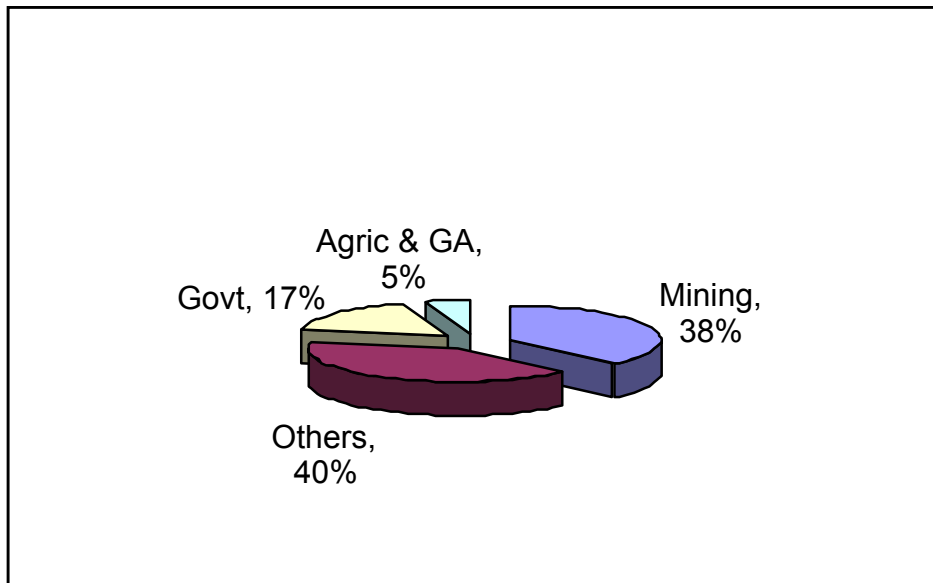


Figure 6.14: Sources of Factor Income by sub-account

It is shown in Figure 6.14 indicates that other sectors (P_{12} to P_{40-43}) and mining/ P_{5-11} in Table 6.2 accounted for about 40 percent and 38 percent respectively of total factor income. These activities include manufacturing, textiles, meat processing, transport, construction and business services. It is also evident that mining, dominated by the diamond industry, contributes substantially to factor income, especially through the gross operating surplus/ F_{11} . Central and local government (P_{38} and P_{39}) contributed just 17 percent of the total factor income. Specifically, central government contributed the largest source of wage income to workers. Agricultural activities together with gathering, harvesting and hunting (P_1 to P_4) accounted for five percent while services/ contributed only two percent.

Regarding the distribution of total factor income, about 65 percent went to gross operating surplus/ F_{11} as returns to owners of capital. Owners of capital here comprise institutions such as private companies and state-owned enterprises. Workers received only about 31 percent of total factor income. By examining the share of the income of citizens versus the income of labour, we derive very interesting results. As a proportion of total factor income, citizen wage income accounts for about 26 percent while non-citizen workers retain just five percent of the total factor income. The major beneficiaries of wage income among citizen workers are skilled personnel/ F_7 , professional and technical employees/ F_1 , clerical staff/ F_5 and unskilled employees/ F_9 . Among non-citizen workers, professional/ F_2 and administrative staff/ F_4 gained most from wage income. Central and local government, mining, trade, construction and business services were the main sources of wage income (accounting for at least 60 percent) for professional, technical, administrative, clerical, skilled and unskilled personnel, both citizens and non-citizens. Except for mixed income/ F_{10} , agriculture contributes minimally to wage income. Mixed income represents factor income that is derived mainly from traditional farming.

When we examine the expenditure of total factor income by the disaggregated principal account, we find that, as expected, all the income is received by owners of factors, namely households (citizen and non-citizen), other institutions and government. Figure 6.15 illustrates the breakdown of total factor expenditure by disaggregated principal account.

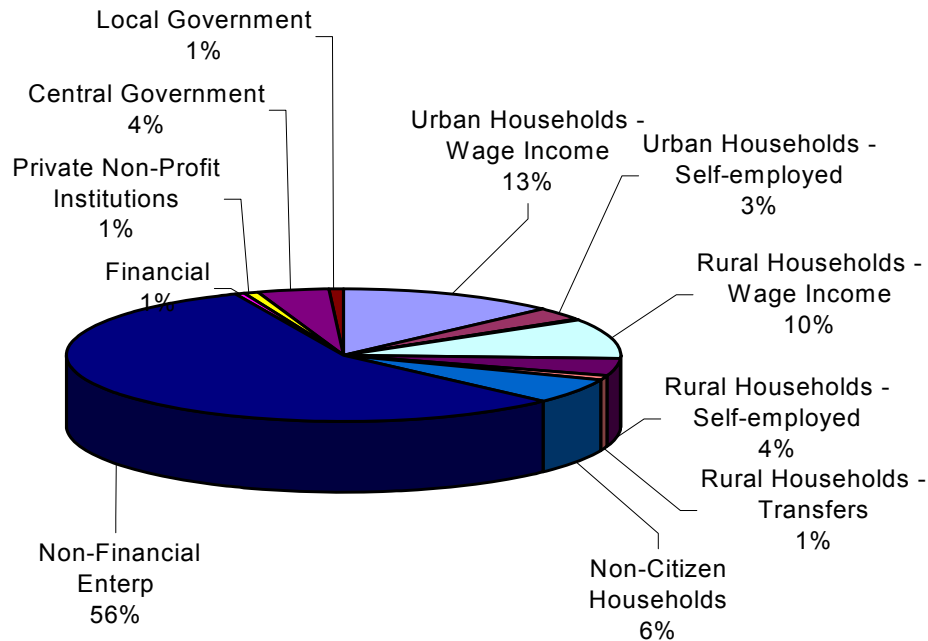


Figure 6.15: Sources of Factor Expenditure by Sub-Account

From Figure 6.15, it is evident that non-financial enterprises/institutions received most of the total factor expenditure (56 %). Non-financial enterprises cover private and state-owned organizations such as mining, manufacturing and business service companies. The diamond mining company dominates these institutions. Their gross operating surplus is the single largest source of income for non-financial institutions. The next most important institutions to benefit from total factor outlays are urban and rural households, both based on wage income. These received 13 percent and ten percent respectively of total factor expenditure, through wages of professional, technical, administrative, technical, skilled and unskilled personnel. Other significant institutions that have benefited from total factor expenditure include non-citizen households (6%), self-employed rural households (4%), central government (4%) and self-employed urban households (3%). While households mainly benefited from total factor expenditure through wage income, central government gained from gross operating surplus, as one of the owners of capital. Local government, rural and urban households, based

on income transfers, and non-profit private institutions each gained about one percent from total factor outlay/expenditure.

6.2.2.2 Household Account

Because this study is largely concerned with improving household food security in Botswana through global trade liberalization, the income sources of household by type, as well as the ways in which households spend their income, will be extensively discussed. In the 1993/94 SAM, seven types of households are included of which the first six are classified as citizen, while the last is non-citizen. Citizen households are further divided into two broad socio-economic and geographic areas, namely urban versus rural. Within each broad socio-economic group, citizen households have been classified as wage-based, self-employed or those dependent on income transfers from government. In terms of this classification, the seven household types are as follows:

- Urban households - wage (citizen)
- Urban households - self-employed (citizen)
- Urban households - transfers (citizen)
- Rural households - wage (citizen)
- Rural households - wage (citizen)
- Rural-households - transfers (citizen)
- Non-citizen households.

Before we examine the share of total household income by household type, the sources of total household income should be investigated. As one might expect most of the household income derives from factors (see Section 6.2.2.1 above), especially wage income. In Figure 6.16 we indicate different sources of household income based on disaggregated accounts. The different sources of income appear in table 6.2 of the reorganized 1993/94 SAM.

Figure 6.16 indicates that administrative, managerial and clerical personnel (AD & MC) contributed about 21 percent of total household income while both professional and technical (Prof & T) and skilled personnel (SK) each accounted for 20 percent of household income. Unskilled employees (UNSK) and government income transfers (GOVT/Tran) accounted for 12 and 11 percent respectively of total household income.

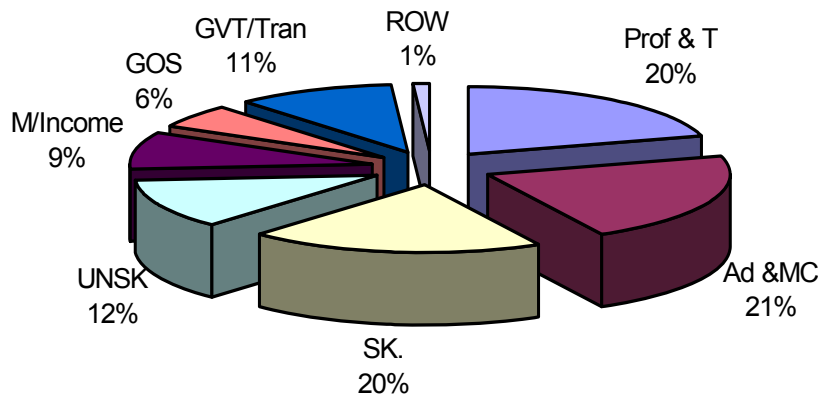


Figure 6.16: Sources of Household Income by Disaggregated Factor Group

Furthermore, mixed income (M/Income) and gross operating surplus (GOS) contributed nine and six percent, respectively, to total household income, as shown in Figure 6.16. Mixed Income covers receipts from the sale of farm produce, handicrafts, firewood, traditional beer, employment in herding livestock and working in arable farming, income from village industries, hunting and gathering, traditional healing, etc (SAM 1993/94, CSO, 1999, p.21). GOS covers returns to owners of capital.

Finally, the rest of the world (ROW), through remittances, provided just one percent of the total household income. ROW covers remittances from workers outside the country. ROW used to be a significant source of income while mine workers from Botswana were employed in South Africa during the 1970's. It is evident from Figure 6.16 that those households that do not have employed members, especially in the relatively high-income areas such as professional, technical, managerial, administrative and skilled categories, face

serious food and income insecurity. We now examine the share of total household income by household type. Figure 6.17 illustrates the breakdown.

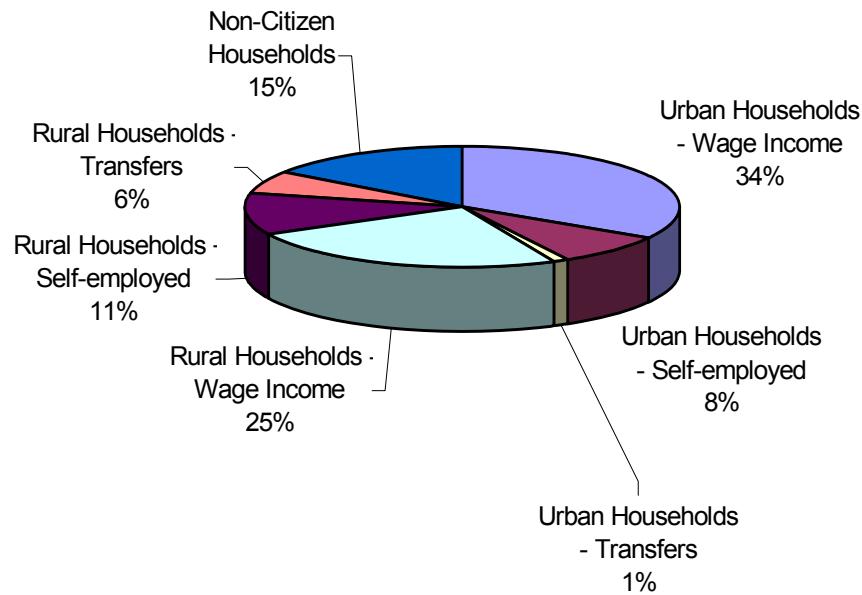


Figure 6.17: Share of total Household Income by Household type

Figure 6.17 shows that urban households who received wage income gained the largest share of total household income, followed by their rural counterparts. Whilst the (citizen) urban households reliant on wage income accounted for about 34 percent of the total household income, (citizen) rural households also dependent on wages received 25 percent of the household income. This means that citizen households in both urban and rural areas which were dependent on wage income, altogether accounted for 59 percent of total household income during the 1993/94 SAM. Wage income from professional, technical, administrative, managerial, skilled and unskilled personnel accounted for almost all income among the wage-based citizen households.

Further, non-citizen households came third, by receiving 15 percent of total household income. This is a result of the large number of foreign workers in the relatively high- income professional, technical, administrative, managerial

and skilled groups. Government has since intensified training in these scarce skills in order to reduce dependency on foreign workers.

Rural households whose income is dependent on self-employment accounted for 11 percent of total household income while their counterparts in the urban areas of Botswana received about eight percent of household income. Citizen households in both rural and urban areas which were together dependent on self-employment received 19 percent of total household income. For citizen households reliant on self-employment, mixed income/ F_{10} and wage employment constituted the key sources of income. The two sources contribute at least 50 percent of total household income.

Citizen households with an income derived from transfers altogether received seven percent of total household income. While rural households depending on such income transfers accounted for about six percent of total household income, their urban counterparts only received one percent. Government income transfers and mixed income are the major sources of income for citizen households largely dependent on income transfers. The two sources account for at least 50 percent of total household income among these households.

Based on results in figure 6.17, it is therefore evident that citizen households whose income is based on transfers constitute the poorest families in the country and therefore face food insecurity. As these impoverished households spend a significant proportion of their disposable income on food and other basic commodities, this study will examine how international trade liberalization could contribute to their food security. Chapter 4, which dealt with partial equilibrium analysis, indicated that the reduction of tariffs and subsidies improves the overall consumer surplus as well as welfare but the results did not indicate which consumers/households are affected. Chapters 7 and 8 examine this aspect by employing the SAM-based approaches.

Insofar as total household expenditure is concerned, Figure 6.18 illustrates the breakdown. The figure shows that purchases of goods and services from other activities accounted for about 50 percent of the total household expenditure for the seven socio-economic family types.

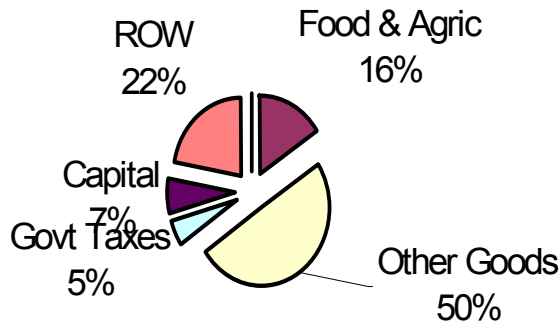


Figure 6.18: Household Expenditure by Sub-Account

These goods cover commodities and services produced by activities ranging from beverages/P₃₃ to services/P₄₀₋₄₃ in Table 6.2, including mining/P₅₋₁₁. Goods such as beverages, clothing/textiles, leather, chemicals, furniture, electrical, transport equipment, housing and utilities form part of the essential household purchases. Imported goods came second and accounted for about 22 percent of total household expenditure. Food items, especially cereals, dairy and vegetables, constitute Botswana's major food imports. At least 70 percent of the country's requirements for these products are met from imports.

Thirdly, about 16 percent of aggregate household expenditure was spent on food and other agricultural commodities produced by all primary activities, i.e. traditional agriculture/ P₁, other agriculture/P₂ and freehold farming/P₃, gathering, harvesting and hunting/P₄. Commodities originating in primary agriculture cover purchases of livestock for meat and milk as well as grains (maize, sorghum, cowpeas, etc.), while products from the veldt also form part of household expenditures. In addition to goods produced by primary agriculture, products of meat processing/P₁₂, dairy processing/P₁₃ and the

bakery/P₁₉ were included under food and agricultural purchases. Meat, dairy and bakery products are very important food items. If imported food items from ROW are included, the share of food and agricultural purchases in total household expenditure increases above the 16 percent indicated in Figure 6.18. Furthermore, households also used about seven percent of their income as savings (capital) while about five percent was paid by all households as taxes to government.

In order to evaluate the effects of international trade liberalization, it is important to understand how different households spend their income, as this would assist one in identifying those goods that could improve food security if markets are made more open and competitive. Table 6.3 records expenditure on goods/services by household type.

Table 6.3: Share of Expenditure on Goods/Services by Household type (%)

	Food & Agric	Others	Govt	Capital	ROW
Urban Households - Wage Income	14.11	49.21	5	16.4	15.27
Urban Households - Self-employed	19.41	50	2.2	16.95	11.63
Urban Households - Transfers	31.71	96.55	6.1	-62.64	28.32
Rural Households - Wage Income	16.49	47.52	4.84	6.61	24.53
Rural Households - Self-employed	26.39	42.75	5.17	-6.28	31.96
Rural Households - Transfers	23	42.4	6.35	-11.76	40
Non-Citizen Households	5.17	56.44	8.67	6.63	23

Source: 1993/94 SAM, CSO, 1999.

Table 6.3 shows that wage-based households in both urban and rural areas spent less than 20 percent on food and other agricultural items/goods, including primary goods produced by activities P₁ – P₄. However, if imported food is included, then these households also exhibit a proportionally higher food-related family budget. About 50 percent of total expenditure by wage-based households in both urban and rural areas was spent on other goods. While wage-based households in urban areas spent about 49 percent of their income on other goods such as clothing, transport, equipment and furniture their rural counterparts used about 48 percent of their income on similar

goods. Further, wage-based urban households disbursed almost the same amount on savings (16.4 percent) as imports or the rest of the world (15.3 percent). Their rural counterparts spent more on imports (24.5 percent) but saved only 6.6 percent of their income. Both households paid government the same amount of their total income in taxes (5 percent).

With respect to self-employed households, the expenditure trend is similar to that of wage-based households. While self-employed households in urban areas disbursed about 19.4 percent of their income on food and other agricultural primary products, their rural counterparts used 26.4 percent of their total family income on similar commodities. On purchases of other goods and services from other activities, self-employed urban households spent about 50 percent of their income on these items while their rural counterparts used 43 percent of their disposable income. In general, relative to urban areas, goods/services such as housing, utilities and clothing tend to be cheaper in rural areas. For instance, land costs are almost negligible in rural areas. Land in the rural areas is generally free; hence lower fixed costs apply.

Whilst self-employed households in urban areas used about 17 percent of their income as savings (capital), their rural counterparts instead drew on their savings in order to finance household expenditure. Specifically, self-employed households withdrew about 6.3 percent of their savings to pay for their household expenditure. Drawing from savings could also imply unreliable or risky regular sources of income for such households. Agriculture is an important source of income among self-employed households. Given the high frequency of drought as well as disease outbreaks, it is not surprising that self-employed households resort to drawing from their savings.

On imported goods, self-employed households in the urban areas disbursed about 11.6 percent of their total income while those in rural areas used almost a third (32 percent) of their disposable income. Once again, imported goods also cover food items, which, as in the case of wage-based households, increase the proportion of the food budget among self-employed households.

With respect to government taxes, self-employed households in the urban areas paid over about 2.2 percent of their income while their rural counterparts contributed 5.2 percent of their total income to government. Part of the reason for this disparity between the two could be that many rural households own cattle, the income from which is subject to tax.

Households dependent on income transfers spent at least 20 percent of their income on food and agricultural primary products, including the gathering of these. As indicated in Figure 6.19, such households accounted for just seven percent of total household income in the country during the 1993/94 SAM. Households reliant on income transfers constitute the poorest families in Botswana.

Whereas urban households dependent on income transfers spent about 32 percent of their income on food and other primary products from agriculture, gathering, harvesting and the like, their rural counterparts used 23 percent of their income on similar goods. The disparity in food-related expenditure between the two household types possibly results from the fact that in rural areas some of the food is easily obtained from relatives and commodity prices are less, owing to lower transportation and marketing costs than in urban areas. Despite the disparity in food-related expenditure, the share of the budget disbursed on the food sector is relatively high for poor households. This will also be examined in detail in Chapter 8 when a policy experiment on tariff reduction/price changes is undertaken.

Where purchases of other goods are concerned, Table 6.3 indicates that households dependent on income transfers in urban areas used almost all their income, about 96.6 percent, on these items that technically prejudiced other household consumer and capital items. As shown in the table, these households drew down their savings by 62.6 percent in order to finance additional expenditure. As for households dependent on similar income in the rural areas, about 42.4 percent of their income was disbursed on other goods. Like their urban counterparts, rural families based on income transfers also

drew down their savings by 11.8 percent to finance additional household expenditure. In general, impoverished households tend to utilize their savings and other assets to finance basic household expenditure.

With respect to imported goods, while urban households based on income transfers used about 28.3 percent of their income to pay for these goods, their rural counterparts surpassed them by spending 40 percent of their total income on similar commodities. Imported goods once again cover food items, among other goods. As a result, the proportion of the food budget among households dependent on income transfers is higher than that captured in Table 6.3. With this relatively high proportion of imported goods purchased by impoverished households, in particular, coupled with the unsuitability of Botswana's land resources for most food and agricultural products, it is important that trade liberalization through tariff reduction, *inter alia*, is advocated and supported so as to enhance food and income security

6.2.2.3 Rest of the World (ROW) Account

Figure 6.19 shows sources of income for the rest of the world (ROW). Total ROW income represents Botswana's total bill of imports from other countries. Imports from other parts of the world accounted for about 29 percent of the total income, while other activities (P₅₋₁₁ to P₄₀₋₄₃ in Table 6.2) in Botswana imported inputs, which contributed 23 percent of the income spent outside Botswana. Activities purchase raw materials from outside Botswana for the purpose of the production of final goods. Imports by capital and other institutions each accounted for 17 percent of the ROW's total income. Capital imports cover foreign investment, while other non-financial institutions imported goods. Households imported goods including food, which contributed about 12 percent of the ROW's income. Wage-based households in both urban and rural areas accounted for at least 50 percent of total household expenditure on imports. Imports by primary agriculture including gathering activities (P₁ to P₄ in Table 6.2) contributed less than one percent of

the ROW's total income, while government together with transfers accounted for two percent of the ROW's total income.

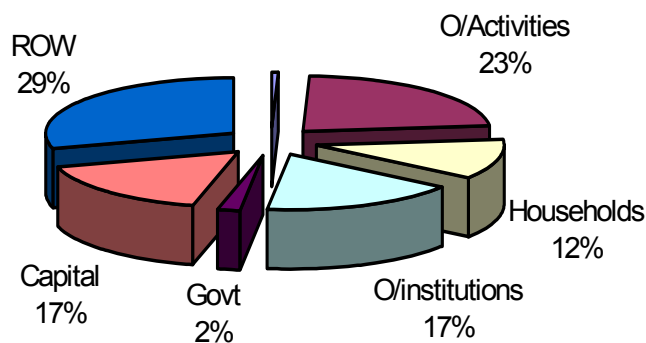


Figure 6.19: Sources of Income for the ROW Account by Sub-Account

Insofar as the ROW's total expenditure is concerned, this represents income to Botswana accruing from the country's exports (diamonds, textiles, meat, tourism, etc). Specifically, ROW's total expenditure is equal to Botswana's total export revenue from international trade. In Figure 6.20, the rest of the world disbursed about 54 percent of its expenditure by paying for exports from products generated by several activities in Botswana. These include minerals, textiles and meat. Furthermore, ROW also paid for other imports from Botswana, which accounted for 24 percent of total expenditure. About 11 percent was paid to Botswana as capital revenue. This covers profits, dividends, and the like from investments made outside the country. Other institutions received eight percent from ROW as remittances and so forth, while government earned about three percent as import duties. Primary agriculture and households received less than one percent from ROW.

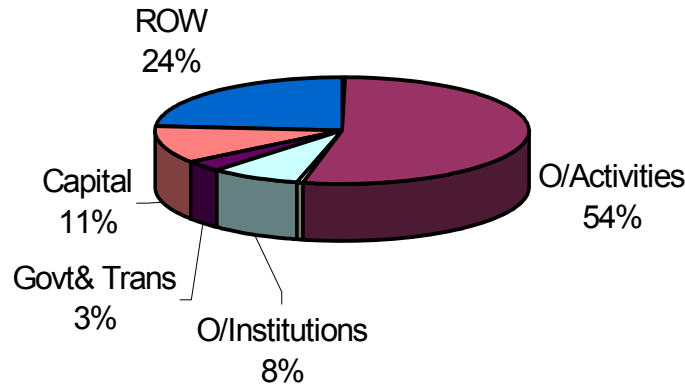


Figure 6.20: Sources of Expenditure for the ROW Account by Sub-Account

It is evident from Figure 6.20 that exports originating from several productive activities in Botswana provide the country with valuable foreign exchange earnings. These earnings are in turn used to import food, inputs, technology, machinery, etc. ROW also provides government with import tariff revenue. In view of the relatively large contribution of exported goods to the country's total export revenue, it is important that improved market access is pursued in order to increase foreign earnings for the purposes of food security, development and economic diversification.

The next two chapters analyze the effects of various policy shocks/experiments on the food security/welfare and competitiveness of Botswana's economy and agricultural sector, in particular. Specifically, both the fixed-price income as well as the price multiplier analysis described in chapter 5 will be used to examine the effects of international trade liberalization on food security and agricultural competitiveness in Botswana.