

**IMPACT OF THE GLOBAL FINANCIAL AND
ECONOMIC CRISIS ON THE NAMIBIAN ECONOMY
A PRELIMINARY ASSESSMENT**

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EXECUTIVE SUMMARY

The global financial crisis has exposed fundamental flaws in the working of the global economic and market systems and served as a reminder of how the world and its risks are highly interconnected. A crisis that began in a small segment of the United States of America's housing market spilled over to the global financial system. Credit markets became dysfunctional and capital flows, which had already slowed, ground to a halt, thus prompting a major global economic crisis. By the end of 2008, most advanced economies were simultaneously in recession for the first time since World War II, reducing growth prospects in emerging markets through a weakening in demand for their exports. As a consequence, global growth for 2009 and 2010 is expected to remain below potential. The years immediately before the crisis were characterized by a combination of rising oil prices, rising food prices, easy credit conditions, aggressive lending practices and less discipline. The collapse of the sub-prime housing market in the USA was followed by a global credit crunch and falling asset prices, with serious implications for the global economy.

There is a general fear in Namibia that the global financial crisis and its likely impact on the economy will have an adverse effect on the well-being of the most disadvantaged and vulnerable members of society. The crisis has increased poverty, putting an even greater strain on what are already overstretched government social services. This report analyzes the possible channels through which the spillover effects of the crisis might have been, or are likely to be, transmitted to the Namibian economy, and evaluates the implications of the government's policy response to the crisis for government budget.

At the level of intuitive economic reasoning, there are five channels through which the affects of the crisis can be transmitted to the Namibian economy: international trade channel; capital flows channel; fiscal channel, financial channel; and stock market channel. This report has used the results obtained by the Bank of Namibia with single-equation estimation of the Namibia Macro-econometric (NAMEX) model to argue that because of the virtual insulation of Namibia's banking institutions and stock exchange from global financial crises, only the first three channels could bring spillover effects of the current financial and economic crisis into the Namibian

economy. Through these three channels, the Namibian economy remains vulnerable to external economic shocks, because of some unique features of the economy. First, the economy has a high degree of openness represented by very high ratios of foreign trade to GDP. Second, the economy has a high degree of dependence on mineral exports to only a few trading partners in Europe and North America, with an even higher degree of dependence on imports from the Republic of South Africa. Third, foreign direct investment is very important in the economy, and it constitutes 25 percent of GDP. Fourth, SACU transfers also contribute substantially to government revenue, accounting for as much as 35 percent of total government revenue each year. High SACU revenue inflows have enabled Namibia to record trade surpluses over the past years, in addition to being a significant contributor to the growth of Namibia's foreign reserves. Namibia has not escaped the effects of the global financial crisis, because the composition and orientation of its trade expose it to one of the main channels through which the sharp downturn in discretionary spending in the developed countries at the epicenter of the crisis is being transmitted to the global economy; namely, the dramatic downturn in trade in goods and services.

Declines in commodity prices will be detrimental to Namibia's balance of trade if they could persist into the medium-to-long-run. Over the past seven years, prices of many commodities, including copper, uranium, nickel, diamonds, platinum and petroleum rose to record highs, and contributed significantly to good growth in Namibia. However, since September 2008, commodity prices have been declining. As the prices of these commodities decline, South Africa, already with a large balance-of-payments deficit faces further pressure on its trade account and the value of the Rand/N\$ currency has fallen by almost 40 per cent against the US dollar. A closer look at Namibia's export destinations indicates that more than 60 percent of its exports have been destined to advanced economies, such as the UK, USA, Italy and Japan. South Africa is a major source of imports, accounting for about 80 percent of Namibia's total imports, and Namibia has traditionally run a deficit in its trade with South Africa. The main export destinations are the United Kingdom, South Africa, Italy, Canada, USA, China and Angola, and Namibia runs trade surpluses with all of them, except South Africa. Primary commodity exports make up more than 50 percent of Namibia's merchandise exports, making the country vulnerable to contraction in global economic growth and to declines in commodity prices.

The global financial crisis has had little direct impact on the Namibian financial sector, which has benefited from continued prudent supervision by the Bank of Namibia (BoN). Banks in Namibia appear to have been well-protected by conservative lending practices and little direct overseas exposure, and remain profitable. Non-performing loans are at very low levels despite a modest increase in 2008, but can be expected to increase as the real economy continues to slow. Given that the banks operate with high levels of real estate and consumer lending, the banking system may be exposed to higher risks in the event that the crisis persists into the medium-to-long-run.

A number of policy initiatives have been taken to mitigate the spill-over effects of the global economic crisis on the Namibian economy. The government has undertaken counter-cyclical fiscal expenditure programmes (mainly of a capital investment nature in economic and social infrastructure). It has also provided tax reliefs and subsidies to selected industries, and to the corporate and personal sectors.

The other tax and non-tax fiscal reforms (apart from zero-rating VAT on a number of basic commodities) announced by the Minister of Finance in the 2008/09 budget included:

- A 50 percent increase in the development budget over the Medium-Term Expenditure Framework (MTEF) period;
- Reduction of the corporate tax rate for non-mining companies from 35 percent to 34 percent;
- An increase in the tax exemption on retrenchment packages from N\$100,000 to N\$300,000;
- An increase in the tax-free amount on pension payout that can be taken as a lump sum from N\$20,000 to N\$50,000;
- An increase in the tax threshold from N\$36,000 to N\$40,000 to provide relief to low income earners;
- Reduction of the personal income tax rates for all tax brackets; and
- Introduction of a new tax rate of 37 percent for people earning annual incomes in excess of N\$750,000.

These fiscal reforms are ambitious, and the report suggests that Namibia's policy makers should consider utilizing the relatively cheaper credit offered by the World Bank and IMF in view of the fact that these institutions belong to the United Nations, of which Namibia is a member. The report shows that without external borrowing, it will be very difficult for Namibia to implement these reforms while maintaining the government's stated fiscal targets. The report recommends also diversification of economic activities and intensification value addition to reduce, not only the heavy dependence on primary exports for foreign exchange earnings, but also the heavy dependence on imports to satisfy domestic demand for goods and services.

1. INTRODUCTION

1.1 Origin of the Crisis

The current global financial and economic crisis has clearly demonstrated that, through international trade and financial transactions, countries of the world have become so integrated that an economic crisis in one economy, especially a big world economy, is likely to affect many other economies. The current global financial turmoil has resulted in a global financial slowdown, the biggest shock to global financial markets since the 1930s. Following the burst of the 'dotcom bubble' in 2000 and the terror attacks on the United States of America (USA) and Britain at the beginning of this century, USA and Britain and other developed economies embarked on a period of sustained expansionary economic policies to ward off recession. In USA, for example, the Federal Reserve Bank lowered its discount rate several times between 2001 and 2003 (Lin op.cit), to encourage the banking institutions in USA to extend more credit to economic entities.

Low interest rates, facilitated by huge capital account surpluses arising from the purchase of USA's treasury bonds by China and other countries, led to rapid growth of credit in USA. The resulting increases in property prices further fuelled credit growth, especially through mortgage lending with subprime market mortgage lending to households, some with no proven means to repay, taking on huge proportions amounting to US\$ 1.3 trillion. USA's main mortgage lenders, Fanny Mae and Freddie Mac, securitized these subprime loans and sold them throughout the global financial system as assets due to a combination of lack of financial innovation and the existence of inadequate domestic and global financial regulation. Lack of financial innovation particularly made it difficult for financial institutions in the global financial system to correctly assess the risks associated with these securitized mortgages.

The years immediately preceding the global financial crisis were characterized by a combination of easy credit conditions, low risk premiums, aggressive lending practices and low risk management and underwriting standards. The easy credit conditions encouraged financial institutions and investors to adopt more leveraged strategies, leaving their capital bases more

exposed to adverse economic developments. As the rates of interest started increasing, the least credit worthy (sub-prime) borrowers began to default, and house prices began to fall with increased repossession of houses by financial institutions. Investors in mortgage-backed securities started incurring heavy losses. By the summer of 2007, increasing defaults on mortgages and growing numbers of foreclosures in USA signaled the beginning of a crisis in the mortgage market. House prices and financial stock prices started to plummet, and the value of household wealth in USA was suddenly reduced by trillions of US dollars. The solvency of Fanny Mae and Freddie Mac, as well as of a number of other major international financial institutions, was severely threatened by these defaults and declines in property and stock prices. In September 2008, the government of USA nationalized Fanny Mae and Freddie Mac, and in the same month, Lehman Brothers filed for bankruptcy. With 639 billion US dollars in assets, Lehman Brothers was the largest firm to file for bankruptcy in the history of USA. These developments led to a widespread financial panic, which manifested itself in large-scale selling of stocks and further declines in stock prices, not only in USA, but also in other major world economies in Europe. The investment banking industry of these countries found itself in a state of virtual collapse.

1.2 Economic Crisis and Developing Countries

The ensuing economic contraction in the big world economies had spill-over effects on developing economies mainly through international trade and financial transactions, with the effects being felt more in the more open developing economies. Given that Namibia is a very open economy, with domestic production geared towards export markets and domestic consumption being heavily dependent on imports, it is one of those developing economies that are very highly vulnerable to external economic shocks. Economic crises differ in terms of origin, scope and consequences. It is therefore necessary to understand the origin, scope, possible transmission channels and impact of the current crisis in order to establish the links between the crisis and negative developments like worsening balance of payments, declining output, increasing unemployment and increasing incidence of poverty in a developing country like Namibia. This report explores possible channels through which the effects of the current global financial and economic crisis could have been transmitted to the Namibian economy, and the noted effects and their impact on the performance of the economy and well being of the people at

the macro and sectoral levels. Possible transmission channels and the effects of the crisis on the economy are examined within the framework of the Namibia Macro-Econometric (NAMEX) planning model (see Nghixulifwa and Tjipe, 2009), which is a modified variation of the World Bank's and IMF's Revised Minimum Standard Model-Extended (RMSM-X) while the impact is presented within the framework of noted changes on outputs of goods and services and at the household level.

This report is organized as follows: Section 1 is this introduction; Section 2 presents a review of the structure and performance of the Namibian economy from 1990, when the country attained political independence, to 2008; while Section 3 presents an explanation of the macroeconomic framework within which possible channels, through which the effects of the global economic crisis have been transmitted to the Namibian economy, are identified. Section 4 analyses the impacts of the crisis on the economy at the macro and sectoral and household levels; and Section 5 presents the government's response to the crisis and possible effects of these fiscal policy reforms on government budget. Conclusions and recommendations are presented in Section 6.

2. STRUCTURE AND PERFORMANCE OF THE NAMIBIAN ECONOMY

2.1 Overview: Important Features of the Namibian Economy

The Namibian economy has a number of distinguishing features. First, Namibia is an open economy that is highly integrated into the global economy with much of what is produced in the economy being exported to other countries, while most of the products consumed in the economy are imported from other countries, with the Republic of South Africa (RSA) being the main source of an estimated 80% of the imports. Table 1.1 presents the degree of openness of the economy over the period 1990 – 2008.

Table 1.1: The Degree of Openness of the Namibian Economy.

Year	GDP N\$-million	Exports Earnings (X) N\$-Million	Expenditure on Imports (M) N\$-Million	(X+M)/GDP
1990	6,054	3162	3834	1.16
1991	6,857	3761	4419	1.19
1992	8,050	4276	5110	1.17
1993	9,302	4951	5587	1.13
1994	11,550	5651	6158	1.02
1995	12,706	6288	7073	1.05
1996	15,013	7593	8796	1.09
1997	16,750	7961	9638	1.05
1998	18,786	8637	10900	1.04
1999	20,686	9548	11773	1.03
2000	27,125	10811	12119	0.85
2001	30,535	12446	14226	0.87
2002	35,430	16230	16966	0.94
2003	37,304	17396	18617	0.97
2004	42,679	16991	17959	0.82
2005	46,177	18678	18615	0.81
2006	54,028	24566	22454	0.87
2007	62,303	31553	32310	1.03
2008	72,904	42066	44770	1.19
Average				1.01

Source: GRN: National Accounts, various issues, National Planning Commission, Central Bureau of Statistics.

Over the sub-periods 1990 – 1999 and 2007 – 2008 exports and imports accounted for more than 100 percent of GDP, with an all time high of 119 percent in 1991 and 2008. While the degree of openness was less than 100 percent over the sub-period 2000 – 2006, it was still high, being over 80 percent of GDP. The high degree of openness of the economy and its heavy dependence on imports from Republic of South Africa (RSA) means that the economy is highly vulnerable to negative economic developments in RSA, and the rest of the global economy.

A second important feature of the Namibian economy arises from the fact that Namibia is a member of the Southern African Customs Union (SACU), with four other countries (RSA, Botswana, Lesotho and Swaziland); and the Common Monetary Area (CMA), with three other countries (RSA, Lesotho and Swaziland). The dominant partner in these two organizations is RSA, which tends to have greater say in the formulation of the policies of the organizations. By virtue of their membership of these two organizations, the smaller economies (including Namibia) have effectively ceded monetary, exchange rate and trade policy discretion to RSA. This leaves them with government spending and non-international trade taxes as the only fiscal policy instruments at their disposal for influencing their respective levels of economic activity. When considering a fiscal policy reform which is based on adjustment of the tax rates, for instance, Namibia's policy makers therefore can only consider adjustment of the rates of taxes on income and profit, which account for 37.2 percent of total tax revenue each year; domestic taxes on goods and services, which account for 27.4 percent of annual tax revenue; and other minor taxes. International trade taxes on imports and exports can only under SACU arrangement.

A third feature of the economy is that with a limited manufacturing base and a small domestic market (a population of only about 1.8 million people), Namibia is heavily dependent on the primary industries (agriculture, mining and fishing) for the generation of foreign exchange needed for the purchase of manufactured, capital and intermediate goods from the international market. Table 1.2 below presents percentage contributions to foreign exchange earnings by agriculture, mining, fishing and manufacturing over the period 1990 – 2008.

Table 1.2: Percentage Contributions to Export Earnings by Commodity, 1990 – 2008.

Year	Livestock, animal products and crops etc.	Fish and other fishing products	Unprocessed Minerals	Manufactured Products
1990	7.69	1.87	56.86	22.11
1991	6.83	5.56	52.88	23.74
1992	7.34	4.58	48.90	27.57
1993	6.71	3.88	47.20	26.64
1994	8.74	4.81	41.53	28.90
1995	9.25	3.29	42.42	35.74
1996	7.41	0.21	42.05	30.58
1997	3.92	0.16	42.98	30.39
1998	4.52	0.17	36.29	37.33
1999	3.95	0.17	42.06	32.17
2000	3.10	1.70	46.76	31.53
2001	3.35	1.51	44.27	33.64
2002	4.94	1.55	43.03	33.00
2003	4.42	0.98	29.28	45.93
2004	4.31	0.92	37.01	39.61
2005	4.96	0.99	35.69	44.22
2006	4.27	0.89	39.33	40.82
2007	3.55	1.35	36.47	39.58
2008	3.49	0.56	36.42	32.40
Average	5.41	1.85	42.18	33.47

Source: GRN: National Accounts, various issues, National Planning Commission, Central Bureau of Statistics

During the period under consideration, exports of unprocessed minerals was the single most important source of foreign exchange, accounting for an average of 42.18 percent of the country's annual foreign exchange earnings, followed by manufactured exports (33.47 percent), agricultural exports (5.41 percent) and exports of fish and fish products (1.85 percent). However, since manufacturing in Namibia is dominated by processing of fish, meat and minerals, the contributions of agriculture, fishing and mining to foreign exchange earnings are much higher, and the actual contributions of manufacturing is much lower than what is presented in Table 1.2. Processed fish exports account for 36.8 percent of manufactured exports, while processed minerals and processed meat, hides and skins account for 12.9 percent and 11.5 percent, respectively. The rest of manufacturing contributes only 38.8 percent of manufactured exports (see Table 1.3).

Table 1.3: Export Earnings (N\$ Million), 2004 – 2008, Constant 2004 prices.

	Year	2004	2005	2006	2007	2008
Live Animals, animal products and crops	Live Animals	500	569	494	466	334
	Animal products	49	39	32	33	35
	Crops, vegetables, fruits and forestry products	184	235	253	267	559
	Total Agricultural Exports	733	843	779	766	928
	Fish and other Fishing Products	156	237	302	331	222
Ores and minerals	Metals ores (including uranium ore)	1261	1246	1324	1539	1688
	Other minerals	117	203	251	288	254
	Diamonds	4911	4531	5879	5488	5337
	Total Unprocessed Mineral Exports	6289	5980	7454	7315	7279
Manufactured Products	Meat, meat preparations, hides and skins	686	893	715	819	882
	Prepared and preserved fish	3231	2893	2397	2108	2043
	Other food products	145	130	98	97	125
	Beverages	551	628	645	793	957
	Copper	212	186	189	182	145
	Zinc refined	694	995	834	1012	923
	Manufactured products	1213	1363	1596	1672	2601
	Total Manufactured Exports	6732	7088	6474	6683	7676

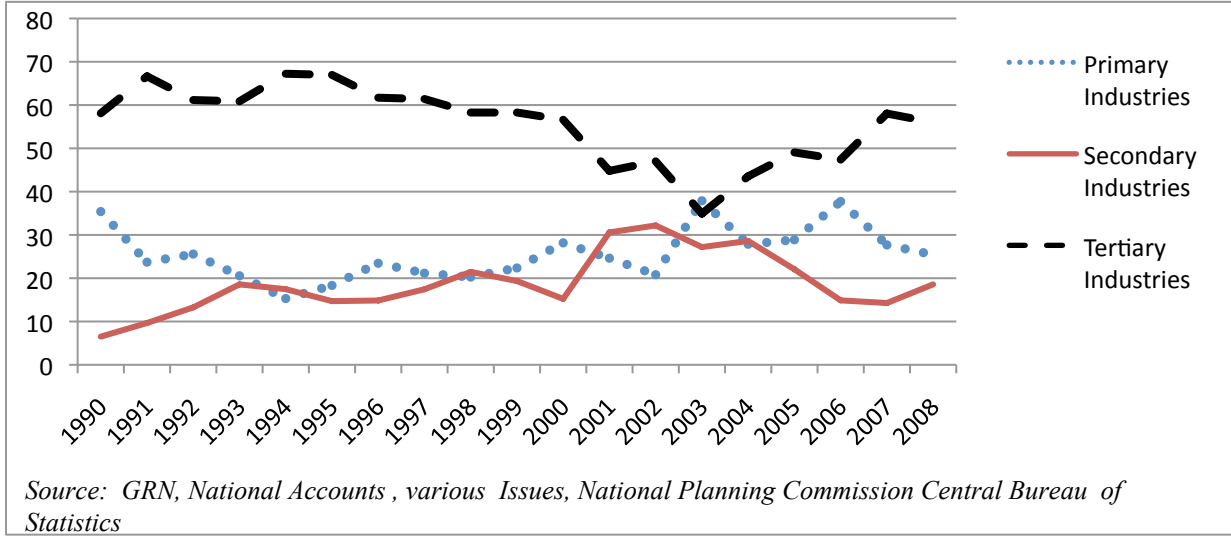
Source: GRN: National Accounts, various issues, National Planning Commission, Central Bureau of Statistics

2.2 Investment Performance

Tertiary industries have dominated domestic investment in the Namibian economy in the post-independence period 1990 – 2008, with an average annual contribution of 55.7 percent to gross fixed investment, which is known also as gross fixed capital formation (GFCF), followed by primary industries (25.5 percent), and secondary industries (18.8 percent). However, the contribution of tertiary industries fluctuated in a declining trend from about 67 percent in 1994 and 1995 to just about 35 percent in 2003, before increasing gradually to 58 percent in 2007 and finally, falling to 56 percent in 2008. The contribution of the primary industries declined sharply from 35.4 percent in 1990 to 15.3 percent in 1994, before increasing gradually to 37.9 percent in 2003. It then decreased to 27.9 percent in 2004, before increasing again to 37.7 percent in 2006. In 2007 and 2008, the contribution of primary industries fell to 27.7 percent and 25.4 percent, respectively. The contribution of secondary industries to GFCF on the other hand fluctuated

initially in an increasing trend, from 6.5 percent in 1990 to 32.2 percent in 2002, before falling to below 20 percent in the sub-period 2006 – 2008 (see Figure 2.1a).

Figure 2.1a: Percentage Contributions to GFCF by Broad Industrial Categories.

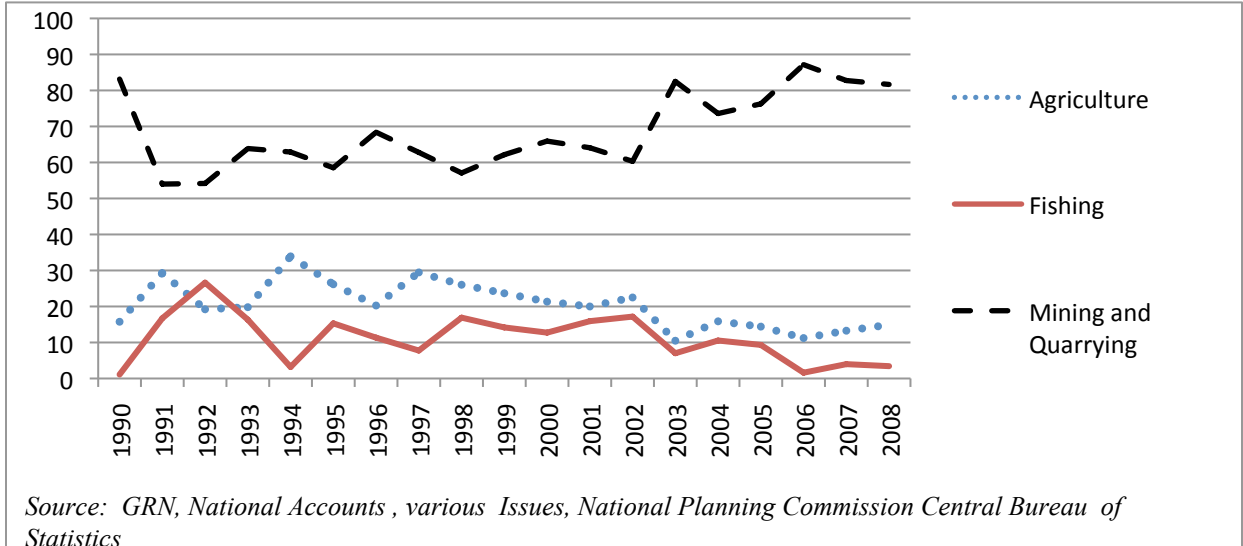


2.2.1 Investment in Primary Industries

Investment in primary industries has been concentrated in the mining and quarrying sector, which accounted for an average of 68.5 percent of gross fixed investment in all primary industries per year over the period 1990 – 2008, followed by agriculture (20.4 percent), and fishing (11.1 percent). The share of mining and quarrying in all primary industries’ gross fixed investment however, declined sharply from 83.2 percent in 1990 to 54.0 percent in 1991, before increasing and leveling off at between 60 and 70 percent from 1993 to 2002. From 2003 to 2008, it increased further to between 73.6 percent and 87.2 percent. The decline in the share of mining and quarrying and in all primary industries’ investment between 1990 and 2002 is attributed to the worsening conditions of supply and demand in the international market for minerals, which led to declining mineral prices and to a temporary total collapse of Namibia’s copper industry while recovery from 2003 is attributed to the establishment of a zinc mining and processing plant in southern Namibia, accompanied by modest recovery of mineral prices in the international market. Figure 2.1b presents the trends in the shares of individual primary industries in total primary industries’ gross fixed investment.

The share of agriculture in total investment by all primary industries increased from 15.8 percent in 1990 to about 40 percent in 1994, before beginning to fluctuate in a declining trend to an all time low of 10.5 percent in 2003. However, between 2004 and 2008, the share of agriculture in total primary industries' investment remained fairly constant fluctuating only within a narrow range of between 11.2 percent and 15.9 percent. The share of fishing in total investment by primary industries increased sharply from 1.1 percent in 1990 to 26.6 percent in 1992, before declining equally sharply to 3.2 percent in 1994. From 1995 to 2004, however, it remained fairly constant between 10.5 percent and 16.9 percent, except in 1997, 2003 and 2005 when it dropped to below 10 percent, and in 2006, 2007 and 2008 when it dropped further to below 5 percent. The share of fishing in total investment by primary industries increased sharply from 1.1 percent in 1990 to 26.6 percent in 1992, before declining equally sharply to 3.2 percent in 1994. From 1995 to 2004, however, it remained fairly constant between 10.5 percent and 16.9 percent, except in 1997, 2003 and 2005 when it dropped to below 10 percent, and in 2006, 2007 and 2008 when it dropped further to below 5 percent.

Figure 2.1b: Percentage Contributions to Primary Industries' GFCF by Sector.



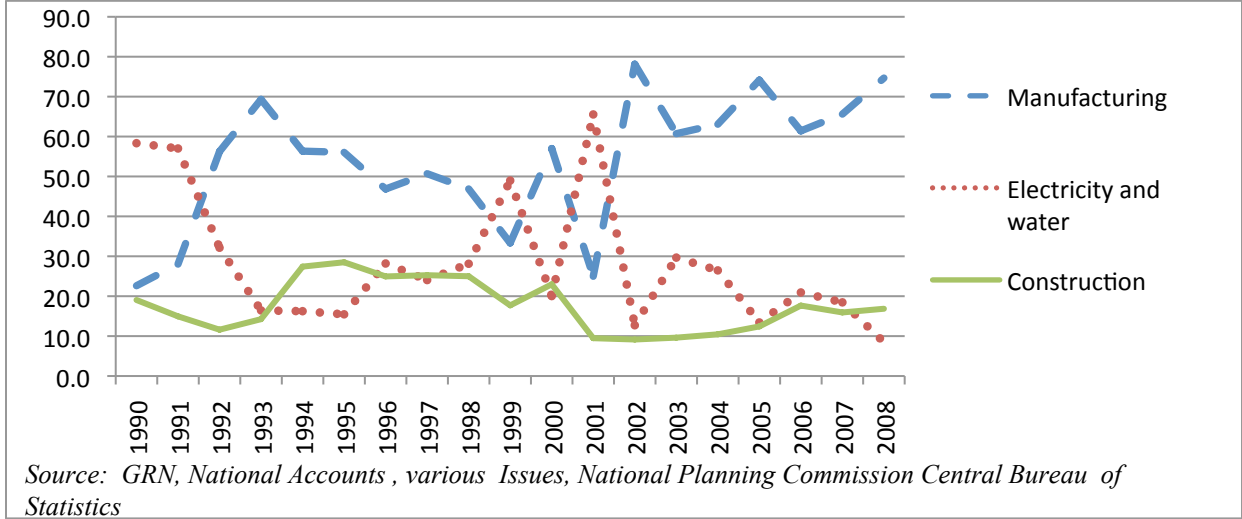
2.2.2 Investment in Secondary Industries

Investment in secondary industries has been concentrated in manufacturing, which accounted for an average of 54.0 percent of annual gross fixed investment by all secondary industries over the period 1990 – 2008, followed by electricity and water supply (28.5 percent), and construction (17.5 percent). Investment in manufacturing as a proportion of total investment by all secondary industries increased steeply from 22.6 percent in 1990 to 69.3 percent in 1993, before fluctuating in a declining trend to 25 percent in 2001. From 2002 to 2008, investment share of manufacturing in total secondary industries investment remained consistently above 60

percent, being 78.1 percent in 2002 and 74.7 percent in 2008. Investment in manufacturing over this period involved intensification of beef and fish processing, production of beverages, and production of other products like textile products and mattresses by companies which were granted Export Processing Zone (EPZ) status. The decline in the share of manufacturing from 74.2 percent in 2005 to 61.4 percent in 2006 is partly attributable to the closure of the textile company, RAMATEX, in 2006, and partly to the cyclical fluctuations that characterized the industry from 1990.

The share of electricity and water supply in gross fixed investment by all secondary industries declined steeply from 58.3 percent in 1990 to 16.2 percent in 1994, before beginning to fluctuate in an increasing trend to 65.5 percent in 2001, followed by a steep decline to 8.5 percent in 2008. The share of construction remained virtually constant between 10 percent and 30 percent over the entire period (see Figure 2.1c).

Figure 2.1c: Percentage Contributions to Secondary Industries’ GFCF by Sector.

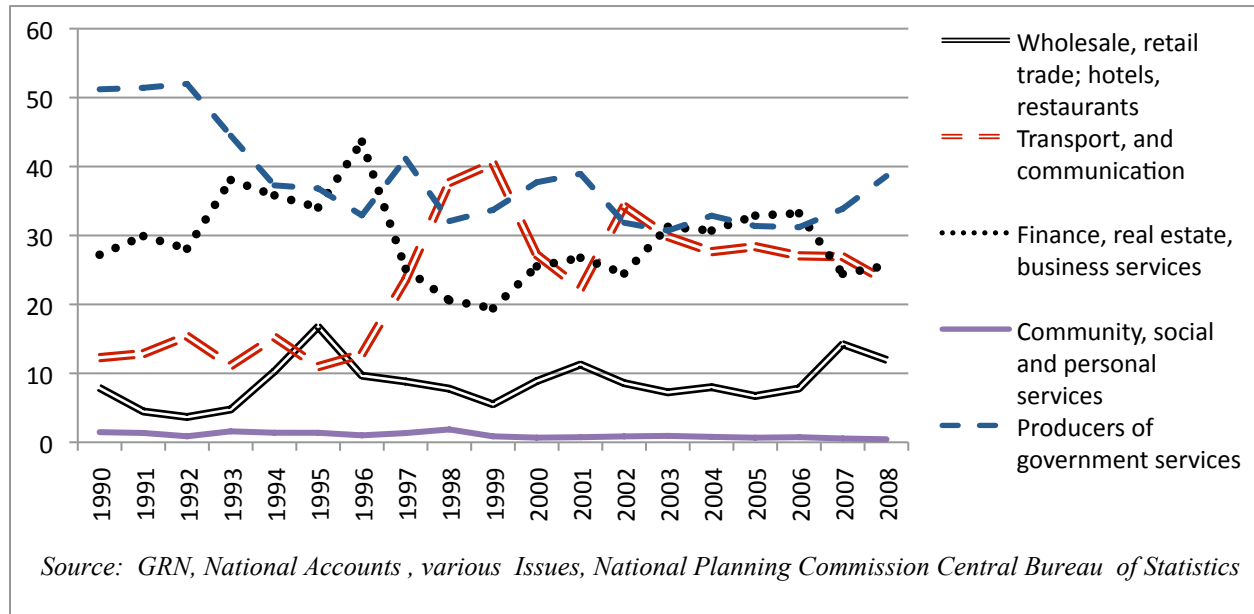


2.2.3 Investments in Tertiary Industries

Producers of government services have dominated investment in tertiary industries, with their share in gross fixed investment by all tertiary industries fluctuating in a declining trend from 51.4 percent in 1991 to 38.6 percent in 2008. Over the period 1990 – 2008, the public sector (producers of government services) contributed an average of 37.9 percent of annual gross fixed investment by all tertiary industries, followed by finance, real estate and business services

(29.3 percent), transport and communication (23.1 percent), wholesale, retail trade and restaurants (8.7 percent), and community, social and personal services (1.0 percent), as presented in Figure 2.1d.

Figure 2.1d: Percentage Contributions to Tertiary Industries' GFCF by Sector.

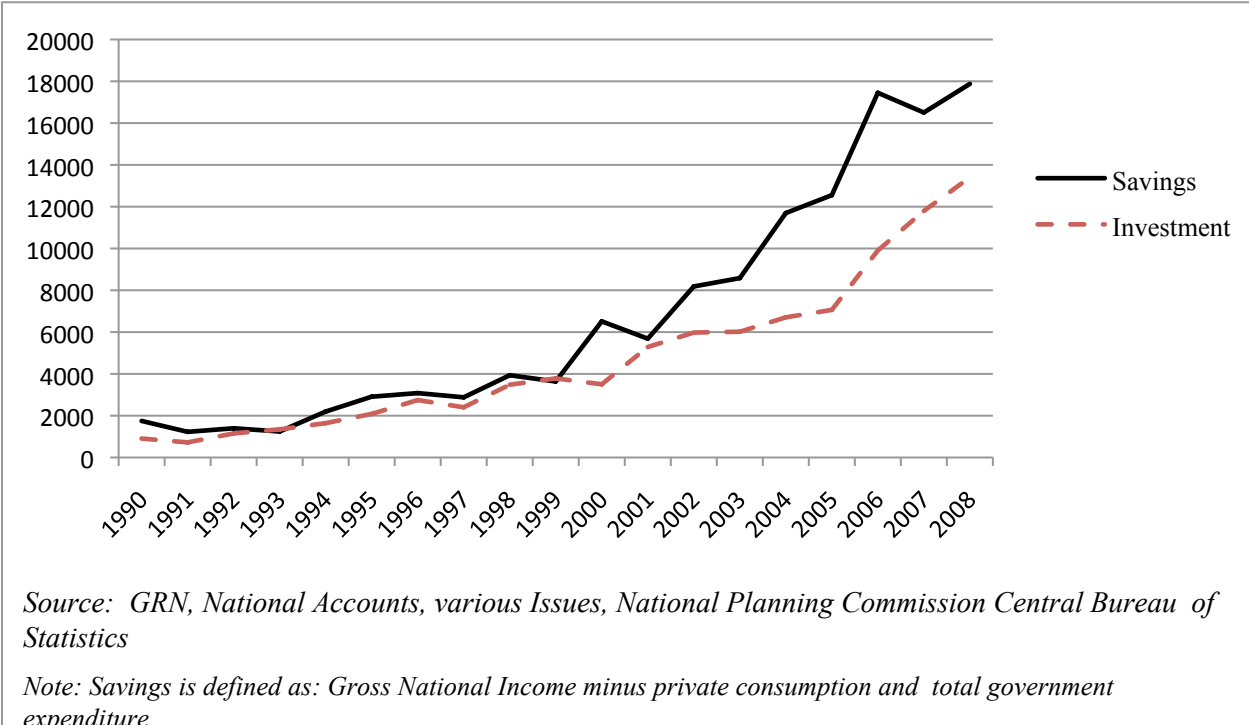


2.2.4 Investments and Growth

The ratio of GFCF to GDP, which is the rate of investment, is an important indicator of future economic growth, because depending on the nature of investment, a higher investment rate will lead to a higher rate of economic growth by making resources available for the expansion of current and future production. The country's first National Development Plan (NDP 1) and second National Development Plan (NDP 2) placed emphasis on the implementation of policies and programmes which encouraged the expansion of productive investment, while discouraging excessive consumption. These policies and programmes improved the rate of investment to an average of 23.4 percent over the sub-period 1990 – 2008. Investment in Namibia over this period was concentrated in five sectors, which together accounted for an average of about 78 percent of total investment each year. These were: the government sector (21.9 percent); finance, real estate and business services (16.5 percent); mining (17.1 percent); transport and communication (12.3 percent); and manufacturing (10.3

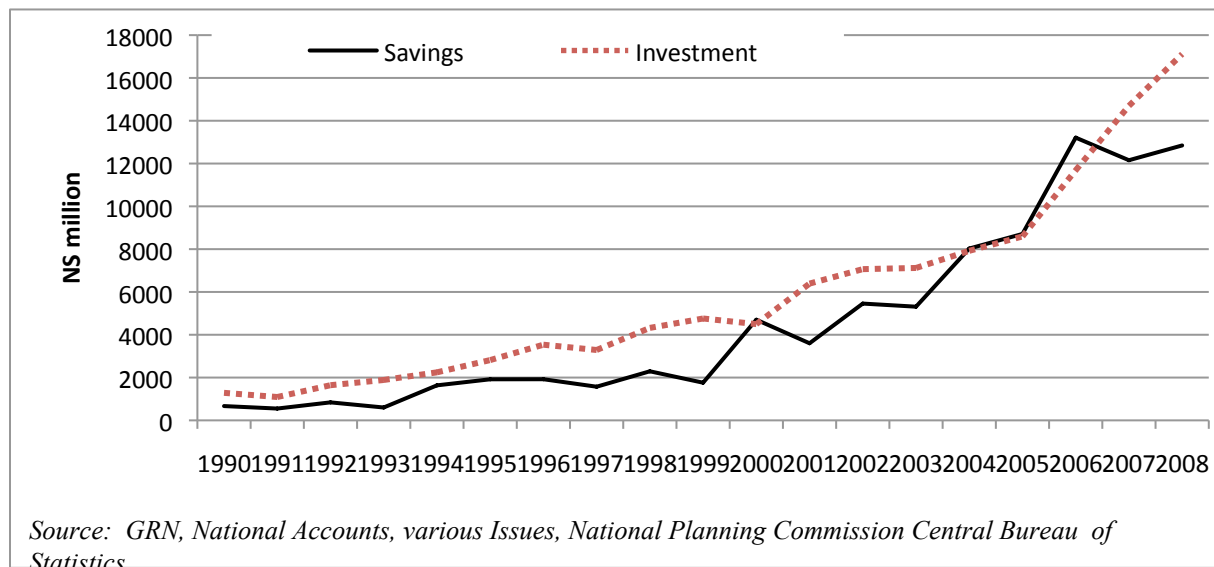
percent). Figure 2.1e shows that there is some correlation between gross fixed capital formation (investment) and GDP, with their graphs displaying similar trends. This suggests that growth of the Namibian economy is investment-driven.

Figure 2.1e: Trends in Investment and GDP, 1990 – 2008.



Namibia’s investment performance in the post-independence period can be attributed to the independent government’s commitment to expanding the provision of essential infrastructures to the previously neglected areas of the country, and to the inflows of foreign direct investment (FDI). Data on FDI inflows show that this type of investment increased steadily over the post-independence decade, from a mere cumulative figure of N\$ 7.3 billion in 1990 to 31.3 billion by 2006 (Bank of Namibia, *Annual Reports*). However, availability of resources for investment has not been a limiting factor in Namibia. Since independence, the economy has operated with excess savings over investment [see Figure 2.1f].

Figure 2.1f: Savings and Investment, 1990 – 2008.



As Odada (2008) has noted, the average annual saving rate over the post-independence period has been 25.3 percent, compared to the average investment rate of only 23.4 percent implying that either there is lack of viable investment opportunities in the country or lack of interest among private entrepreneurs to invest in the country. Whatever the cause of this phenomenon, it is an indication of capital flight out of the economy. Importantly, it means that some of domestically generated savings leave the economy to finance investment abroad.

The important question is therefore is; why don't domestically generated savings translate into productive investment in the economy? Going beyond the obvious answer based on the returns to investment, Bonelli and Odada (2003) offer alternative explanations for this phenomenon:

- i) The first and most often cited one is that there are not enough investment opportunities in the country. Although there have been various attempts to attract FDI in the past, including, but not limited to, the establishment of the Export Processing Zone (EPZ) regime; the creation of state corporations and parastatals; and the reform of industrial policies, these efforts have not been quite successful since Namibia is a small economy, and very close to a large one (RSA) with which it shares special trade and monetary regimes that hinders local investment and growth opportunities. This calls for greater effort at and innovative approaches to attracting investment and creating opportunities.

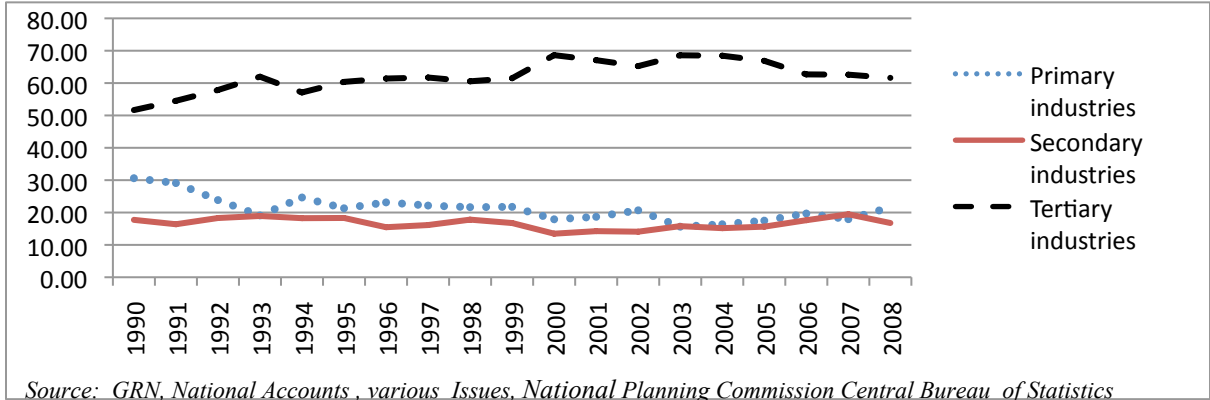
- ii) The second causal factor has to do with the form of savings. It has been held that some domestically generated savings are of long-term contractual nature. Therefore, they would not be suitable for investment in the domestic economy. In addition, these contractual savings (pensions, insurance, and social security) are usually invested in South Africa. If this were true, expanded investment opportunities alone would not be enough to channel savings to domestic investment. There would be need to think beyond the obvious and put in place a set of policy and institutional measures to ensure that such savings are invested in the economy.
- iii) Lack of appropriate human skills or low levels of human capital, in general - also has prevented savings from being transformed into investment. Increasing human capital via education, training and improvements in the skills (and skill mix) of the labor force is thus an important option that ought to be considered.
- iv) The structure of the Namibian economy, and in particular the structure of its financial system, may also be responsible for low investment, relative to savings. Regarding the structure of the economy, sensitive geo-climatic conditions that are at the basis of many economic activities, or mineral reserves exhaustion, have been cited as a causal factor of low investment. New technologies can be used to ease at least some of these constraints. Regarding the latter, a further development of the financial system, including the creation of a development bank, which has since been done, offers a viable solution. .
- v) Lastly, Namibia's membership of the CMA also makes it easy for domestic savings to move out of the country, because of the free capital flows within the CMA area.

2.3 Composition of Output: 1990 – 2008

Like domestic investment in the post-independence period (1990 – 2008), domestic output was also dominated by tertiary industries, which accounted for an average of 62.1 percent of GDP each year over the period, followed by primary industries (21.2 percent) and secondary industries (16.7 percent). While the contribution of tertiary industries fluctuated in an increasing trend between 51.7 percent and 67.1 percent over the entire period, the contributions of primary

industries and secondary industries remained fairly constant between 15.6 percent and 30.6 percent, and below 20%, respectively [see Figure 2.2a].

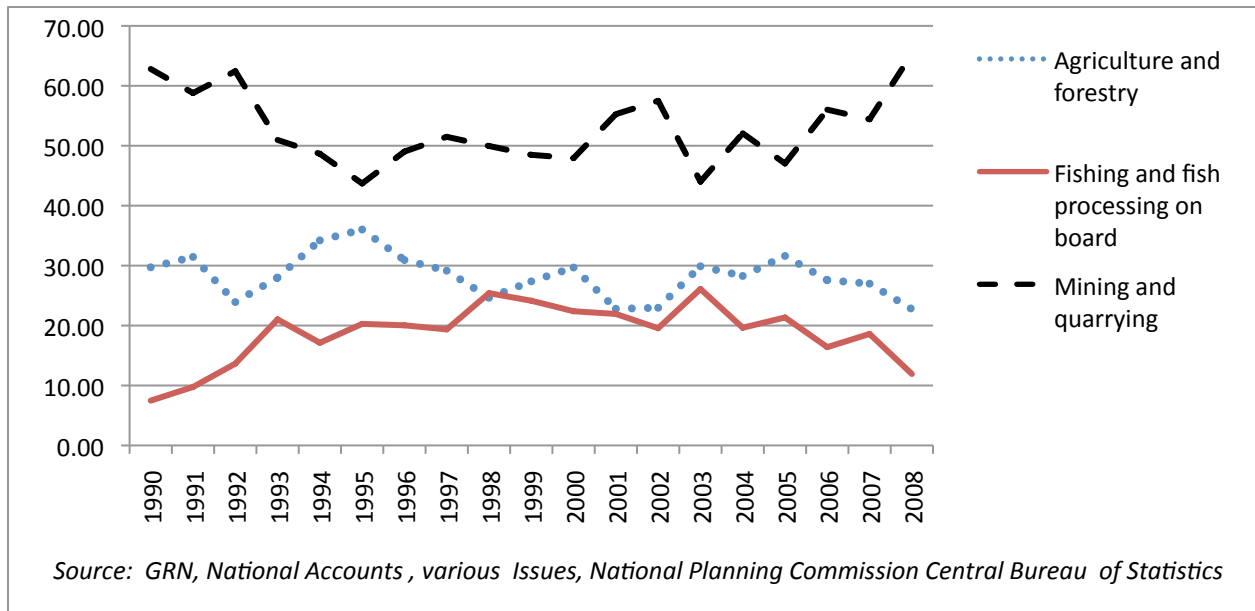
Figure 2.2a: Percentage Contributions to GDP by Broad Industrial Categories, 1990 – 2008.



2.3.1 Primary Industry

The contribution of mining and quarrying to primary industries’ GDP fluctuated in a declining trend, from 62.8 percent in 1990 to 43.7 percent in 1995, before increasing to 65.3 percent in 2008. The average contribution of mining and quarrying to primary industries’ GDP over the entire period was 52.9 percent per year while agriculture and fishing contributed 28.3 percent and 18.7 percent, respectively, with their contributions fluctuating between 23 percent and 36 percent, and between 7.5 percent and 26.1 percent, respectively (see Figure 2.2b).

Figure 2.2b: Percentage Contributions to GDP by Individual Primary Sector (1990 - 2008).



An important development in the post-independence period, which has boosted agricultural production, is the provision of agricultural extension services such as veterinary services, crop production services and fish farming services, which were hitherto confined to commercial farming areas, to communal areas. With intensified provision of agricultural extension services, irrigation outlets and improved livestock breeds to communal farmers, there is still substantial scope for improving agricultural production. Namibia has started, with reasonable success, to exploit its competitive advantage in the production of grapes alongside the Orange River in the southern parts of the country. The favourable climatic conditions in these parts of the country has led to Namibia's grapes getting ripe up to two weeks earlier than grapes produced by her main competitors, South Africa and Chile, with qualities which fetch premium prices in the European market. Kalili (2000) has observed that the production of grapes in Namibia expanded phenomenally, from just 32 hectares in 1991, to 1,028 hectares in 1999, by which time it was providing 1,400 permanent jobs and an additional 2,100 seasonal jobs. The granting of a 900-ton duty-free quota for Namibia's grapes within the Lome Agreement has helped boost the Namibian grapes industry (Republic of Namibia, 2002). Further opportunities for improvement still lie in the introduction of other crops such as dates, oranges, mangoes and vegetables under irrigation.

In the immediate pre-independence decade, illegal fishing and over-fishing were rampant, and the independent government of the Republic of Namibia had to inherit a fishing

industry with almost totally depleted fish stocks. The framework of the industry had to be drastically changed to avoid total collapse of the industry. A Ministry of Fisheries and Marine Resources was formed in the independent government structure, to manage fisheries resources and marine environment with the view to restoring the almost totally depleted fish stocks. A 200-mile Exclusive Economic Zone was declared off-shore along the Namibian coast of the Atlantic Ocean, to eliminate illegal fishing in Namibian waters by fishermen from other countries. A quota system was introduced, to allocate fish catch quotas to Namibian fishing companies and minimize the problem of over-fishing. These improvements in the framework of the industry have led to the recovery of the fish stocks (Republic of Namibia, 2002). The improvements in the management of Namibia's fisheries resources have led to significant increases in the contribution of the industry to foreign exchange earnings. Over the period 1995 – 2004, exports of processed and unprocessed fish products accounted for an average of 18.2% of the country's total annual foreign exchange earnings, thus establishing the industry as the third most important source of foreign exchange earnings, after the mining industry (37.6%) and the services sector (19.8%). Only about 2% of fish is consumed domestically (Republic of Namibia, 2002), which gives the industry a great potential for generating foreign exchange. Namibia exports fish products mainly to the European Union (EU) market. Given that fish, if well managed, is a renewable resource, the industry could have even a greater potential than mining for future foreign exchange earnings.

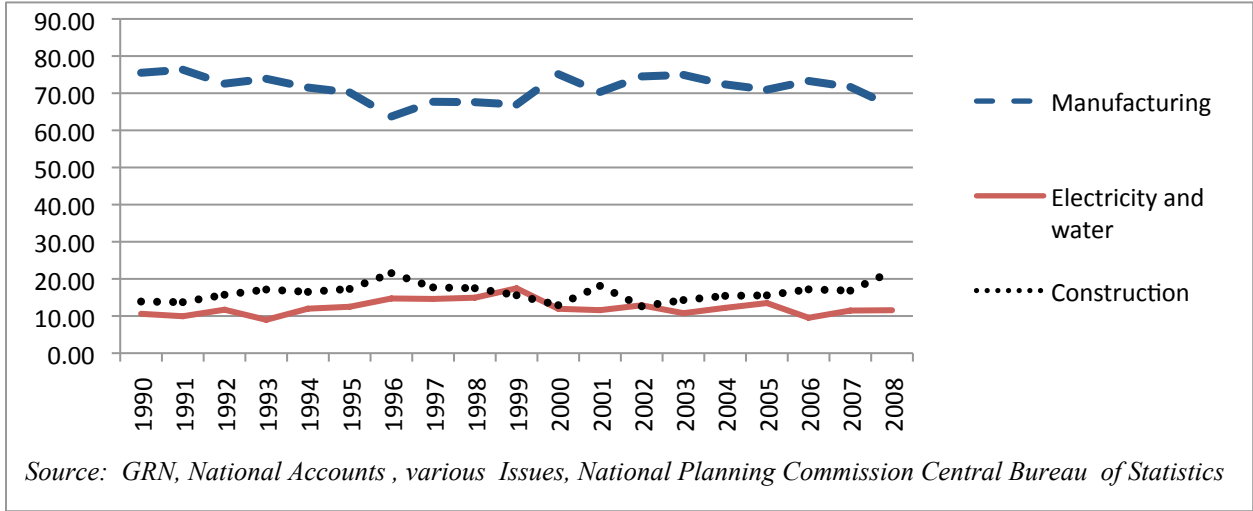
The mining sector plays an important role in the Namibian economy through its contributions to GDP, foreign exchange earnings, employment and government revenue. The country is well endowed with mineral resources. It produces and exports diamonds, uranium, base metals (copper, lead and zinc), precious metals (gold and silver), dimension stones, industrial minerals and semi-precious stones, among others. Diamonds, uranium, zinc and copper are the main mineral exports, with diamond exports continuing to dominate mineral export earnings. However, in spite of this sector's significant contributions to primary industries' GDP (52.9 percent over the period 1990 – 2008), its contribution to employment has remained insignificant because of the capital intensive nature of its operations. Recent initiatives of the government to encourage small mining operational units in the country may remedy this situation by increasing employment creation in the industry. A more feasible long-term solution, however, lies in diversification of economic activities towards more employment intensive

activities. The diamond industry is already encountering deposits with declining contents of ore, and activities of the industry are already shifting towards offshore diamond mining, which is even more capital intensive (Republic of Namibia, 2002). Value addition in the mining industry is only happening on a limited scale, and is limited to only copper smelting and diamond cutting and polishing. Substantial scope for value addition still exists in zinc refining, intensified copper smelting and diamond cutting and polishing. A major zinc mine has been established in the southern region of the country, which promises to boost also the manufacturing sector, because its development includes a zinc refinery (Republic of Namibia, 2002).

2.3.2 Secondary Industry

Secondary output over the period 1990 – 2008 was dominated by manufacturing, which contributed an average of 71.3 percent of total secondary industries’ GDP each year over the period, followed by construction (16.4 percent) and electricity & water supply (12.3 percent). While the contribution of manufacturing fluctuated in a declining trend, from 75.5 percent in 1990 to 63.7 percent in 1996, before increasing to 73.3 percent in 2006, the contributions of construction and electricity & water supply remained fairly constant between 10 percent and 20 percent over the entire period, as shown in Figure 2.2c.

Figure 2.2c: Percentage Contributions to GDP by Individual Secondary Sectors, 1990 – 2006.



Though the contribution of manufacturing improved significantly in the post-independence period (1990 – 2008), it still remained low compared to the contributions of

tertiary and primary industries. Manufacturing activities in the country are still dominated by food processing (beef and fish) and production of beverages. Copper smelting has also been an important contributor to manufactured exports accounting for an average of about 6% of total annual export earnings by manufactured products over the sub- period 1995 – 2004. The contribution of this export activity to foreign exchange earnings however, diminished from 1998 to 2000, when the main copper producing company, Tsumeb Consolidated Limited (TCL) stopped its operations because of adverse global conditions, which led to uneconomically low copper prices in the international markets. The activity resumed in 2001 with improved international market conditions, but under a local company, Ongopolo Mining and Processing Limited (OMPL). From 2002, zinc refining also started to contribute to manufacturing exports. With the discovery of large zinc deposits in southern Namibia, and the establishment of a zinc refinery for the exploitation of these deposits, the activity has a good potential to contribute to manufacturing exports. Thus, without substantial investment in other manufacturing export activities, Namibia's exports of goods will continue to be dominated by only a few product groups originating from the primary industries, a factor which is bound to inhibit the pace of structural transformation, which is needed for the revitalization of growth prospects.

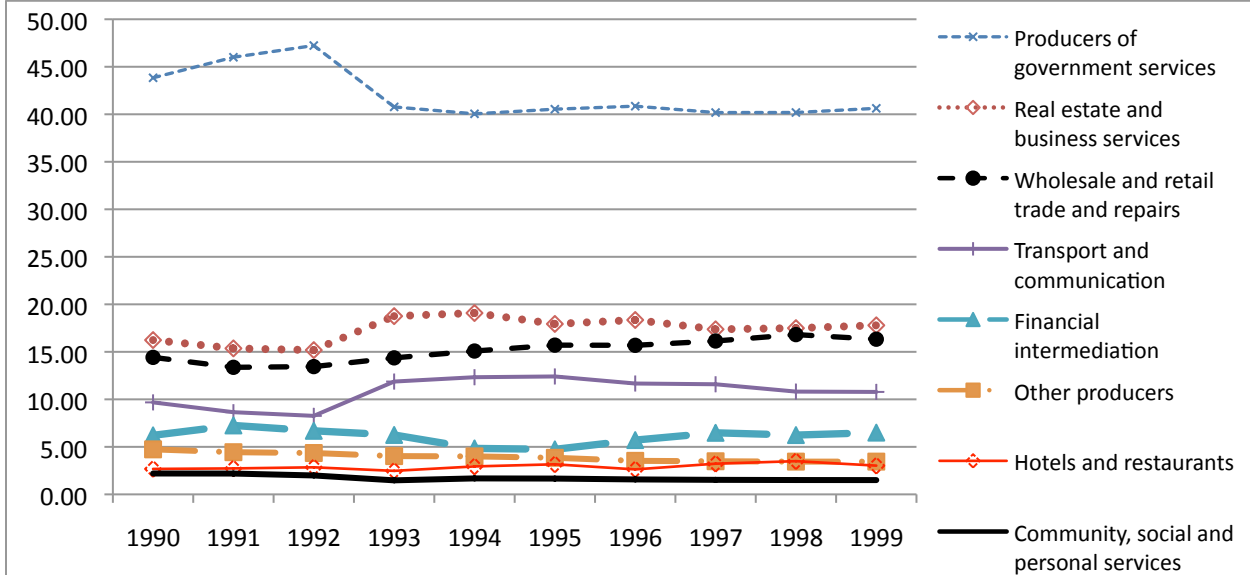
Though these trends in manufacturing suggest that not much value addition is taking place in the economy, some diversification started towards the end of the 1990s' decade, which was aimed at enhancing value addition. The diversification of exports has included the production of long-life milk and the production of *pasta* using maize as an intermediate input. Other incentive schemes, mostly in the form of policy and legislative frameworks, have also been put in place to encourage diversification and to promote production for the export market. These have included the Export Processing Zones (EPZs) Act of 1995, the Foreign Investment Act of 1990, the Manufacturing Incentive Act of 1993 and the Export Incentive Act of 1994. The companies participating in the EPZ scheme were initially meant to be exclusively involved in manufacturing activities, with only a few allowed to be involved in warehousing and assembling. However, due to circumstances not yet fully established, 24 out of the 63 companies originally granted EPZ status have already withdrawn from the scheme. Out of these 24 companies, five are still in business, but are producing only for the domestic market and the Southern African Customs Union (SACU) market. Six other companies have stopped operation, while the remaining 13 companies never even started operation under the EPZ scheme (Republic

of Namibia, 2002). The emerging trend is that companies tend to be withdrawing from the EPZ scheme close to the expiry or reduction of the preferential incentive packages like tax holidays. Most of the companies, which have withdrawn from the scheme, have, however, cited the bad political situation in Angola (through which they moved their products to other countries in the region), poor infrastructure and lack of operating capital (Republic of Namibia, 2002) as the main reasons for their withdrawal. The expectation that the EPZ scheme would provide a major boost to manufacturing in the country is, therefore, proving elusive. The scheme therefore needs a new framework, to discourage companies, which try to join the scheme only to derive the benefits of its incentive packages.

2.3.3 Tertiary Industry

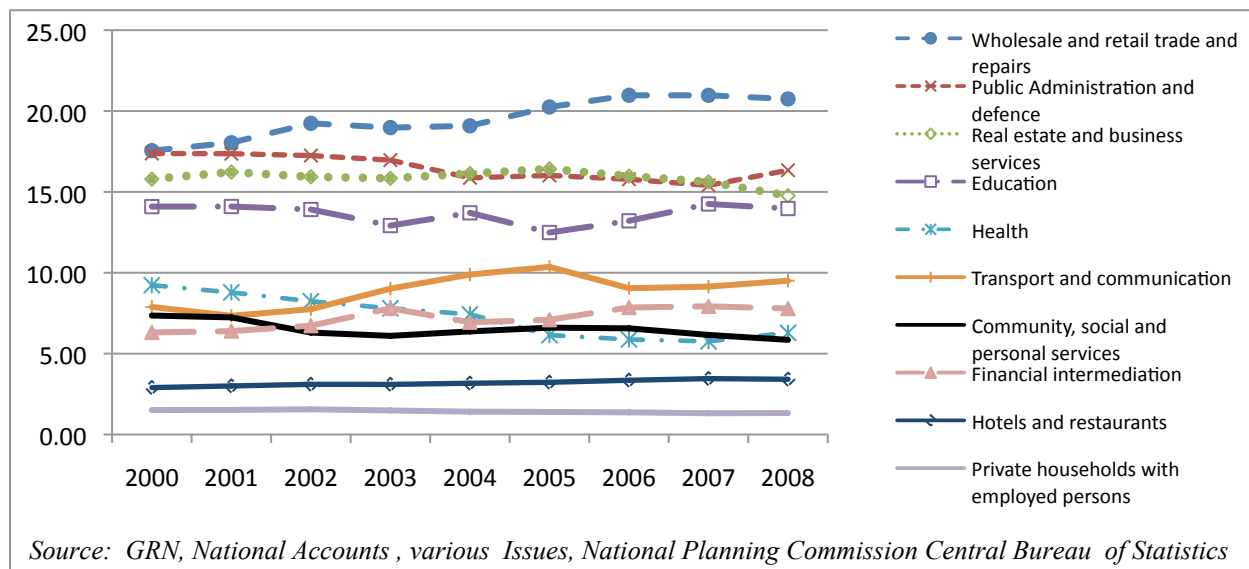
Tertiary output over the period 1990 – 2008 was dominated by government services, which accounted for an average of 42.0 percent of total tertiary industries’ GDP each year over the sub-period 1990 - 1999, followed by: finance, real estate and business services (17.4 percent); wholesale trade, retail trade and repairs (15.1 percent); transport and communication (10.8 percent); and financial intermediation (6.09 percent), as shown in Figure 2.2d1. These percentage shares changed significantly in some cases, following the introduction of a new classification of tertiary industries over the sub-period 2000 – 2008 (see Figure 2.2d2).

Figure 2.2d1: Percentage Contribution to GDP by Individual Tertiary Sectors (1990 -1999).



Source: GRN, National Accounts, various Issues, National Planning Commission Central Bureau of Statistics

Figure 2.2d2: Percentage Contribution to GDP by Individual Tertiary sectors (2000 – 2008).



Exports of services should be made up of purchases of services like professional services, hotels and restaurant services, etc. by foreigners, who are non-resident in Namibia. However, data on service exports in the country's *National Accounts* have included direct purchases of goods and services in Namibia by non-residents, which makes it impossible to separate purchases of goods from purchases of services by non-residents. From 1995, an effort has been made to separate pure service exports from direct purchases in the country by non-residents, which still include purchases of goods. This shows that Namibia's exports are dominated by exports of goods, which account for over 80% of total export earnings, and that direct service exports are still insignificant in relation to total service exports; direct purchases in Namibia by non-residents dominate service exports. However, it has to be noted that direct purchases in Namibia by non-residents do not strictly represent service exports, because they include purchases of goods. What comes out clearly is the fact that the service sector still plays an insignificant role in Namibia's export sector, given that trade in the country involves mainly goods imported from South Africa.

Right from independence in 1990 tourism was one of the sectors identified as having the potential to provide the engine for driving the economy away from heavy dependence on the mining sector for growth and foreign exchange earnings. However, establishing how this sector has performed in relation to this expectation is not easy because a good part of its impact on the

economy is reflected only indirectly through improvements in the performance of other sectors like hotels and restaurants and transport and communication.

Another tertiary sector which has registered a significant contribution to GDP in the post-independence period is finance, real estate and business services. While financial intermediation has not made significant contributions to GDP, the structure of Namibia's financial sector has developed significantly in the post-independence period. Currently Namibia has four commercial banks, namely: First National Bank of Namibia; Standard Bank of Namibia; Bank Windhoek; and Nedbank. The country's formal financial sector, however, includes also an agricultural bank, a development bank, a savings bank, pension funds, insurance corporations' unit trusts and a stock exchange, the Namibian Stock Exchange (NSX). The country also has an informal financial sector, which comprises of cash loan operators, pawnbrokers and moneylenders. The activities of these formal and informal financial institutions are coordinated by a central bank, the Bank of Namibia.

2.4 Growth Performance, 1990 – 2008

The Namibian economy realized a real economic growth (real GDP growth) of 4.6 percent over the one and half decade period 1990 – 2006. This growth was driven by an impressive growth of 6.2 percent in gross fixed investment, and it represented a significant improvement in economic performance over the immediate pre-independence decade, 1980 – 1989, when the economy grew at a paltry 2.7 percent, with gross fixed investment growth of -3.8 percent (Odada, 2008). High rates of growth were realized in five sectors: electricity and water supply (9.1 percent); fishing (8.6 percent); wholesale, retail trade, hotels and restaurants (8.1 percent); transport and communication (7.8 percent); and finance, real estates and business services (7.5 percent). All sectors realized positive GDP and investment growth over the period 1990 – 2006, except government services and community, social and personal services which, despite realizing positive GDP growth recorded negative investment growths (see Table 2.1). In some sectors, like manufacturing and mining, high investment rates realized proportionately lower output growth, a phenomenon which can be explained by differentials in returns to investment. The table identifies electricity and water supply, fishing and the three service industries as the engines of growth over the period 1990 – 2006.

Table 5.1: Real Gross Fixed Investment and Real GDP Growth Performance, 1990 – 2006, 2007 and 2008.

Economy Sector	Real Investment Growth (%)			Real GDP Growth (%)		
	1990 - 2006*	2007	2008	1990-2006	2007	2008
The whole economy	6.2	10.2	2.7	4.6	5.5	3.3
Agriculture	4.5	3.9	3.9	2.3	-4.6	2.4
Fishing	11.5	125.7	-12.0	8.6	-19.0	-0.9
Mining	8.8	-25.3	-4.7	2.4	0.5	-2.6
All Primary Industries						
Manufacturing	18.1	11.4	55.4	3.4	8.4	-0.6
Electricity and Water Supply	8.3	-6.4	-38.3	9.1	4.0	5.9
Construction	8.6	4.4	41.7	5.9	14.5	15.3
All Secondary Industries						
Wholesale, retail trade and hotels	5.1	166.2	-20.5	8.1	8.2	2.6
Transport and Communication	10.0	35.2	-13.6	7.8	5.4	5.5
Finance, Real Estate & Business Services	3.2	1.9	4.2	7.5	9.7	6.1
Community, Social & Personal Services	-2.0	5.1	-22.0	2.0	1.1	-0.7
Government Services	-0.3	49.2	13.4	3.0	8.1	8.1
All Tertiary Industries						
<i>*For the period 1990 – 2006, the figures represent continuous growth rates derived by a natural exponential function with time as the explanatory variable. The figures for 2007 and 2008 represent percentage changes between 2007 and 2006 and between 2008 and 2007, respectively.</i>						
<i>Source: GRN, National Accounts, various issues. Central Bureau of Statistics, National Planning Commission.</i>						

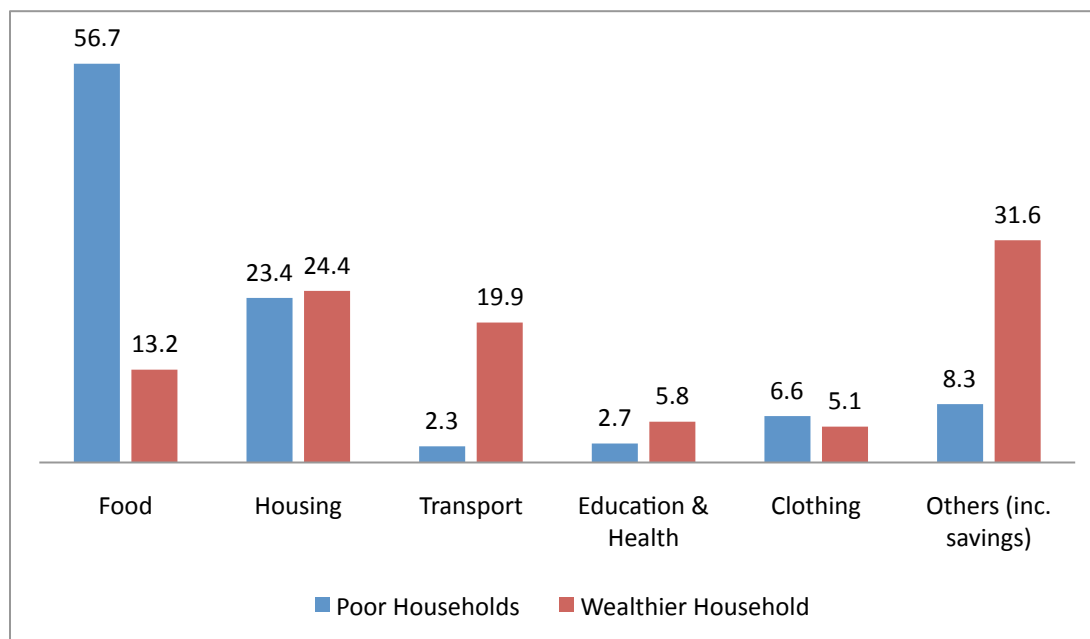
Since independence, the government has put in place a number of macroeconomic policies and programmes, which have been aimed at promoting growth and development and at addressing the imbalances perpetuated by the apartheid system. While most of the discriminatory policies and practices, which existed in the labour market during the colonial period, had been removed, the issue of land distribution and ownership has not been addressed to a significant extent. Inequalities still exist in land distribution and ownership, and government's policies and programmes on land and agrarian reforms do not seem to be achieving significant results. Some vertical redistribution has been taking place through government expenditure on the social sectors favouring the previously disadvantaged groups and through the expansion of public employment for many blacks. Taxing the huge economic rents in the mining sector and to a lesser extent in the fishing sector is financing public expenditure. The tax burden falls mostly

on the organized business sector, which is predominantly white owned. Through fiscal policy (expenditure and tax policy) the government has tried to achieve a moderate redistribution. However, major asset redistribution, especially of land, has not taken place. Though the economic benefit of radical and fast track land redistribution is less obvious, its social and political benefits are more apparent. There is therefore a realization by all stakeholders that a significant redistribution of land cannot be avoided or delayed any further if the country is to decisively tackle poverty and inequality.

2.5 Incidence of Poverty and Inequality

Poverty remains a widespread phenomenon in Namibia, despite the reported impressive real economic growth and spirited efforts by the government to raise the living standards of the people over the past two decades. The Namibia Household Income and Expenditure Survey (2003/04 NHIES) results show that 27.8 percent of the population are poor while 13.8 percent are severely poor, where poor households are defined as those that have monthly expenditures of less than N\$262.45 per adult equivalent, and severely poor as those households with expenditures of less than N\$184.56 per adult equivalent. The poor spend substantial proportions of their total expenditures (56.7 percent) on food, compared to wealthier households who spend only 13.2 per cent on food (see Figure 2.3a). While the poor allocate only 2.7 percent of their expenditures on education and health, wealthier households allocates more than 5 percent of their expenditures on these services. In addition, wealthier households allocate substantial portions of their incomes to saving and investment and, in the process, acquire more productive assets which in turn generate more income for them. This partly explains why income inequality, measured by Gini-coefficient, remains high at 0.63, despite concerted efforts to bring it down. Figure 2.3a shows that the consumption/expenditure patterns of wealthier households are more balanced across all expenditure categories, while the poor allocate 80 percent of their expenditures on food and housing, leaving virtually nothing, or very little, for saving and acquisition of productive assets that have the capacity to generate more income in the long-run.

Figure 2.3a: Composition of Household Expenditures (percent of total expenditures).

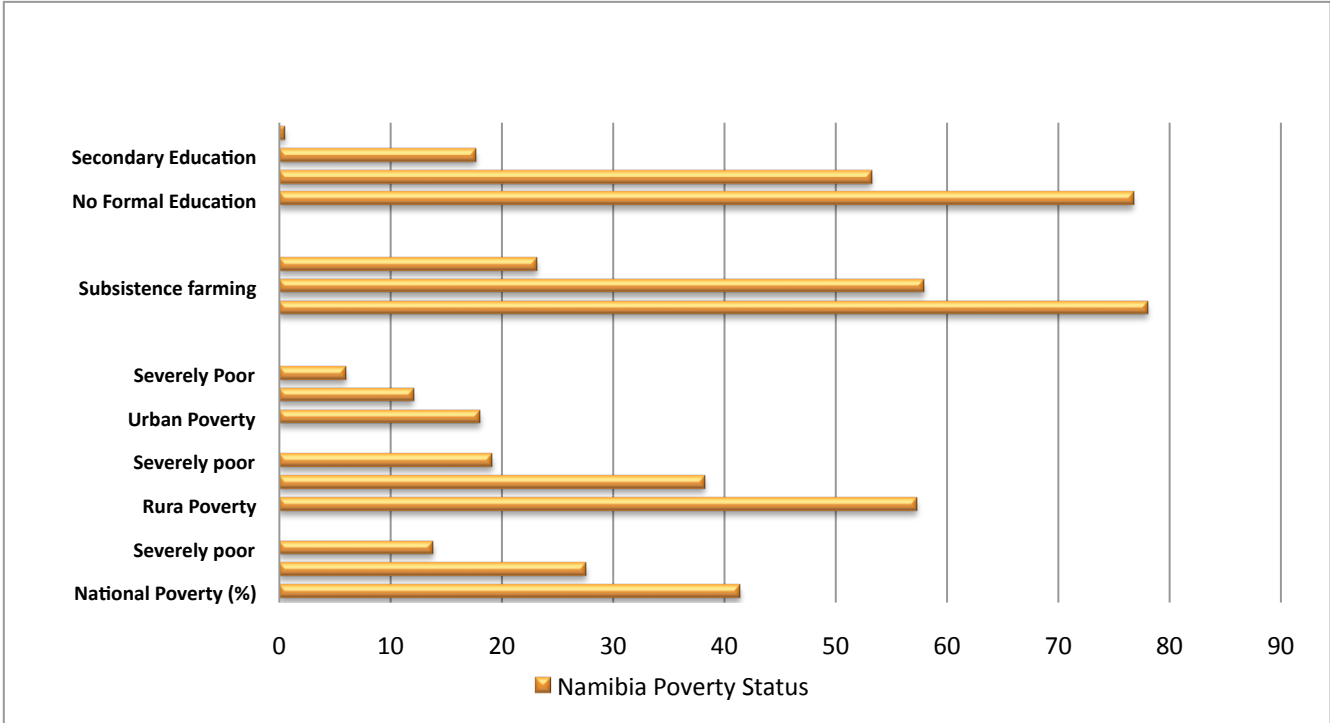


Source: 2003/04 NHIES

With a Gini Coefficient of 0.63 Namibia has one of the highest income inequalities in the world and poverty remains stubbornly at high levels and continues to be a deep rooted problem facing the country, although the 2003/04 NHIES shows that the poverty headcount ratio (which measures the incidence of poverty as the proportion of individuals or households earning less than a given level of income), dropped from 58 percent to 38 per cent between 1993/94 and 2003/04 and the depth of poverty, as measured by the poverty gap (defined as the average shortfall of the income of the poor with respect to the poverty line, multiplied by the headcount ratio) also declined from 28 per cent in 1993/94 to 13 per cent in 2003/04. Figure 2.3b highlights the incidence of poverty in Namibia by level of education and source of income, and its intensity in rural and urban areas. The incidence of poverty is highest among people with no formal education, 76 percent of whom are classified as severely poor. Those with primary education also have got a fairly high incidence of poverty with 52 percent of them classified as poor. The incidence of poverty declines as the level of education of the household head increases with only 17 percent of households whose heads have got secondary education are classified as poor, while those households whose heads have got tertiary education have zero incidence of poverty. The figure also shows also that households who depend on pension or subsistence farming as the

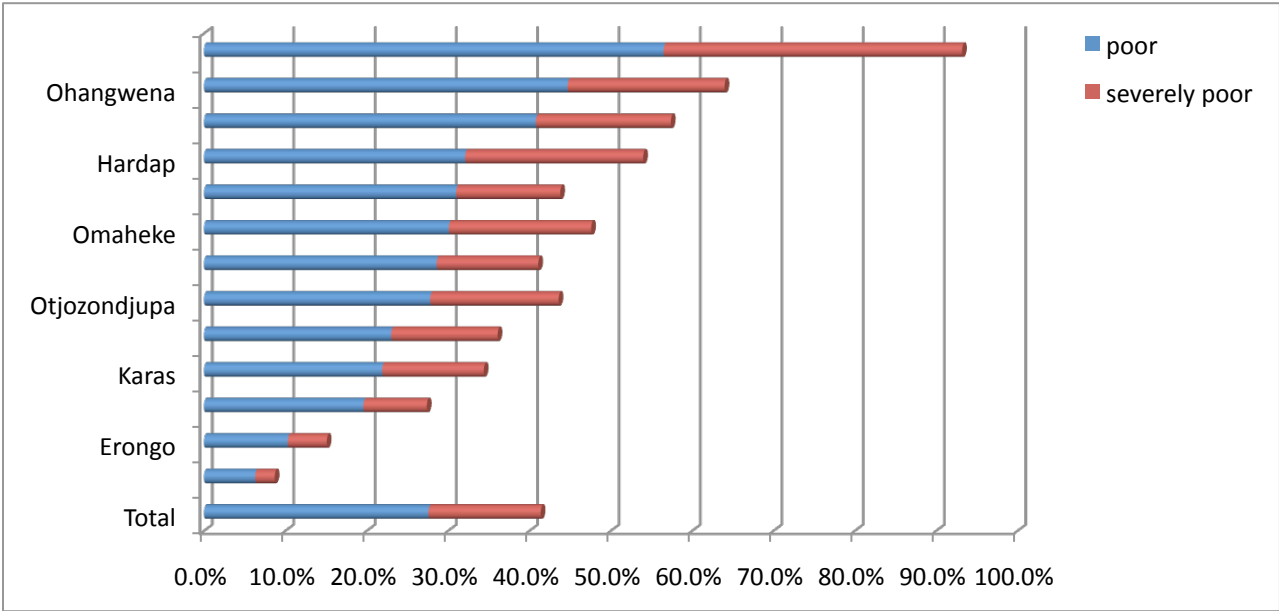
main sources of income have a higher incidence of poverty than the average national poverty incidence. Moreover poverty is very high also in rural areas where close to 60 percent of households are poor. Differences in poverty levels also prevail among administrative regions, with Ohangwena region not only having the highest incidence of poverty and severe poverty, but also the highest proportion of poor households (see Figure 2.3c)..

Figure 2.3b: Namibia’s Poverty Profile and Incidence, 2003/2004.



Source: NHIES

Figure 2.3b: Incidence of Poverty by region, 2003/2004.



Source: Central Bureau of Statistics, NPC

Lack of skills is a major determinant of poverty, and unless more of the unemployed are trained and absorbed in the labour market, it will be difficult to reduce poverty in Namibia. The Gini –coefficient for urban and rural areas stands at 0.58, indicating that the degree of inequality is the same in rural and urban areas

3. TRANSMISSION MECHANISMS AND CHANNELS: CONCEPTUAL FRAMEWORK

3.1 Transmission Channels and Mechanisms

At the conceptual level, it is important to have some idea of the mechanisms through which a global economic crisis can be transmitted to an economy like Namibia's to be able to evaluate the impact of the current financial and economic crisis. For an open economy like that of Namibia, a global economic crisis can be transmitted through one or more of the following channels: international trade (exports and imports); capital inflows and outflows; government budget; international aid; and stock market prices. Given that Namibia depends heavily on imports to satisfy domestic demand for goods and services, a global economic crisis that leads to a weakening of demand for its exports (mainly minerals and processed beef and fish) is bound to cause trade deficits and a general decline in the level of economic activity. Also, because the revenue derived by the Namibian government from the revenue pool generated by the common tariffs imposed by SACU on international trade accounts for a significant proportion of the government's total revenue, a global economic crisis that leads to reduced volume of trade is bound to have negative implications for government budget.

A logical starting point in evaluating the impact of the global financial and economic crisis is to try to establish the path the economy could have taken in the absence of the crisis. This is an empirical issue which can be addressed only with a macroeconomic model. This report has used the Namibia Macro-Econometric Model (NAMEX), which is a modified variation of the World Bank's and IMF's Revised Minimum Standard Model-Extended (RMSM-X) to establish factors which determine the channels through which a global economic crisis can be transmitted to the Namibian economy. This model was designed by the Bank of Namibia to provide a theoretical framework for understanding the linkages between key macroeconomic variables. It divides the Namibian economy into four broad interrelated sectors: the real sector, including international trade; the fiscal sector, which comprises government revenue, expenditure and government budget; the financial sector, which comprises demand for and

supply of real money balances; and the price sector represented by the domestic general price level (see Nghixulifwa and Tjipe, 2009). Aspects of this model, which are relevant to this report, are explained in greater theoretical and empirical details in Appendix 1 of this report. The model identifies channels through which the current global financial and economic crisis might have been, or is likely to be, transmitted to the Namibian economy. The specific channels are discussed in the subsequent subsections.

3.2 The Trade Channel

Balance of trade is the difference between the value of a country's exports of goods and services and the value of goods and services it imports from the rest of the world in a given year. The Bank of Namibia's NAMEX model has generated relations between exports and imports and their respective determining factors. Demand for Namibia's exports is positively influenced by changes in total income of the rest of the world (income of countries that buy Namibia's exports), and negatively by changes in Namibia's multilateral real exchange rate, which is a measure of the competitiveness of Namibia's exports in international markets. The Bank of Namibia has compiled time-series data on the country's multilateral real exchange rate applicable to exports, based on the definition of real exchange rate as the ratio of the domestic general price level (expressed in foreign currencies) to the general price level in the rest of the world. According to this definition, an increase in the real exchange rate represents "a real appreciation", while a decrease represents "a real depreciation".

A real appreciation, on the one hand, means that goods and services produced in Namibia have become generally more costly than goods and services produced in the rest of the world and are, therefore, less competitive in international markets. Consequently, demand for Namibia's exports by the rest of the world falls. A real depreciation, on the other hand, means that prices of goods and services produced in Namibia have fallen in relation to prices of goods and services produced in the rest of the world and, as a result of this, Namibia's exports have become cheaper and more competitive in international markets. Consequently, demand for Namibia's exports increases. This explains the negative relation between demand for exports and real exchange rate.

With respect to imports, a real appreciation would lead to an increase in demand for imports by Namibian residents, because goods and services produced in the rest of the world have become generally cheaper and, therefore, more competitive in Namibia's domestic market. A real depreciation would lead to a fall in demand for imports by Namibian residents, because domestic goods and services have become generally cheaper than imports. This suggests a positive relative relation between demand for imports and the real exchange rate: an increase in the real exchange rate causes an increase in demand for imports, and a decrease in the real exchange rate leads to a fall in demand for imports. The NAMEX model has produced an import function which is in conformity with this theoretical prediction.

International trade is, therefore, one channel through which a global economic crisis can be transmitted to the Namibian economy. When, on the one hand, a global economic crisis results in prices in the rest of the world increasing faster than domestic prices in Namibia, this would bring about a real depreciation in Namibia, or a decrease in Namibia's real exchange rate, which means an improvement in the competitiveness of Namibia's exports in international markets. Namibia's balance of trade with the rest of the world would then improve through an increase in exports to the rest of the world and a decrease in demand for imports by residents of Namibia. When, on the other hand, it leads to Namibia's domestic prices increasing faster than prices in the rest of the world, there would be a real appreciation in Namibia, whose trade balance would then fall through a decrease in demand for its exports by the rest of the world and an increase in demand for imports by domestic residents. It is, however, important to note that increases in export earnings in the case of a real depreciation are bound to be dampened by the general decline in international market prices, while in the case of a real appreciation, the decreases in demand for exports are reinforced by the general decline in world prices to lead to a greater fall in export earnings.

Since the current global economic crisis has resulted in a recession in major world economies which serve as important destinations for Namibia's exports, a further decline in Namibia's export earnings is expected to arise from the decline in demand for its exports brought about by the fall in national incomes of these economies. Furthermore, the crisis has been accompanied by a weakening of Namibia's currency against the world's major currencies like the US dollar, the Euro and the pound sterling. This has resulted in a decrease in Namibia's real

exchange rate (i.e. a real depreciation), which is expected to have improved Namibia's competitiveness in international trade. The resulting improvement in Namibia's trade balance arising from the real depreciation therefore would have to be weighed against the decline in trade balance brought about by falling incomes in the rest of the world, to be able to predict the net effect on trade balance.

Over the past seven years, prices of many commodities, including copper, uranium, nickel, diamonds and platinum increased to record highs, and contributed significantly to good growth performance in Namibia. However, since September 2008, commodity prices have been declining. As the prices of these commodities declined, South Africa, which was already operating with a large balance-of-payments deficit, faced further pressure on its trade account that saw the value of the Rand (and the Namibian dollar which is pegged to it) decline precipitously by almost 40 per cent against the US dollar. Namibia's merchandise trade balance has been recording deficits since 2000 and the overall balance of payments has been in deficit for the past three years. Table 3.1 shows that despite the crisis worsening towards the end of 2008, Namibia recorded a major increase in export earnings amounting to N\$9.5 billion in the fourth quarter of 2008, compared to N\$5 billion in the same quarter of 2007. The strong growth in exports in the fourth quarter of 2008 was also accompanied by a strong growth in imports amounting to N\$10 billion. But while imports remained virtually constant in the first and second quarters of 2009, exports were more robust, increasing by 12% from N\$6.6 billion in the first quarter to N\$7.5 billion in the second quarter. Increases in exports of uranium and other products seem to have compensated for the decline in exports of diamonds over the first half of 2009.

Table 3.1: Trade Balance(N\$ million) 2008/2009.

		Imports	Exports	Balance
2008	Q1	-6,781.4	5256.104	-1,525.3
	Q2	-7,378.5	6162.273	-1,216.2
	Q3	-7,607.4	5190.100	-2,417.3
	Q4	-10,021.8	9515.023	-506.7

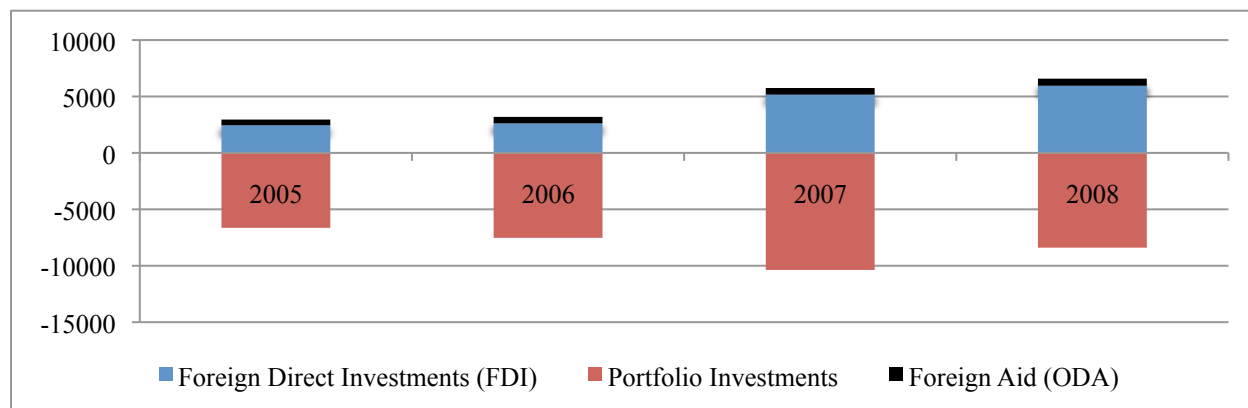
2009	Q1	-7,788.9	6644.452	-1,144.4
	Q2	-7,788.9	7456.991	-331.9

Source: Bank of Namibia, 2009.

3.3 Capital Flows Channel

Capital flows is another channel through which the current global financial crisis could affect the Namibian economy (see Appendix 1). Capital flows which have helped drive Namibia's economic growth include: foreign direct investment (FDI); portfolio investment flows (portfolio equity flows and bonds flows); and foreign aid. Private investment in Namibia is influenced mainly by foreign direct investment, and has played a significant role in determining the direction and pace of economic growth. Despite strong FDI inflows since 2005, Namibia continues to experience massive capital outflow (portfolio investment) because its capital market is too small to support portfolio investment holdings of pension and insurance companies' funds. However, the effect of the global financial crisis seems to have started with portfolio investment outflow declining from 2007 to 2008, as equity/share prices collapsed, and most investors started looking for safe havens. This trend is consistent with the developments in the banking sector, where banks became net exporters of capital to parent companies in South Africa, due to increased cash deposits from institutional investors such as pension funds and insurance companies as they increased their portfolio holdings (see Figure 3.1).

Figure 3.1: Capital Flows 2005 – 2008 (N\$ million).



Source: Bank of Namibia

Although FDI showed an upward trend from 2007 to 2008, equity capital investment which contributes to capital stock of the country seems to have collapsed and has been replaced by intercompany transfers and retained earnings, which do not add much to the country’s capital stock. Foreign aid on the other hand has remained insignificant and is not likely to have a significant effect on the economy.

3.4 The Fiscal Channel

The NAMEX model produced positive relations between direct tax revenue, on the one hand, and the average tax rate and changes in national income, on the other hand (see Appendix 1). The implication of this relation is that a decline in Namibia’s gross national product (GNP) leads to a decrease in direct tax revenue through a fall in taxes that are responsive to income. An increase in GNP, on the other hand, is expected to lead to an increase in taxes responsive to income. With a progressive structure of direct taxation, individuals and businesses have to pay higher proportions of their incomes as they move to higher income brackets with increases in GNP. This leads to an increase in the average direct tax rate which, in turn, leads to a further increase in direct tax revenue. Table 3.2 shows how the current global financial and economic crisis might have been transmitted to the Namibian economy through the fiscal channel. It shows declines in domestic taxes on goods and services, and on incomes and profit. These declines are attributable partly to the resulting economic slowdown, and partly to the fiscal reforms that the government put in place in response to the crisis including reduction of the marginal tax rate and zero-rating of value added tax (VAT) on a number of basic commodities.

Table 6.2: Impact of the Global Crisis on Government Budget

	<u>Actual</u>	<u>Revised</u>	-	Estimate	
	<u>2007/08</u>	<u>2008/09</u>	<u>%</u>	<u>2009/10</u>	<u>%</u>
			<u>Change</u>		<u>Change</u>

	<u>N\$ millions</u>	<u>N\$ millions</u>	-	<u>N\$</u> <u>millions</u>	
Taxes on income and profits	6,729.7	7,388.0	10%	6,267.5	-15%
Domestic Taxes	4,081.5	3,686.0	-10%	3,441.1	-7%
Taxes on international trade	8,085.1	8,882.0	10%	9,332.0	5%
Total Tax Revenue	19,183.1	20,186.0	5%	20,179.6	0%
Total revenue (own sources)	20,610.6	21,735.0	5%	21,428.1	-1%
Grants	78.0	238.0	205%	350.0	47%
Total Revenue and Grants	20,688.6	21,973.0	6%	21,778.1	-1%
Social Operational	5,642.5	7,123.1	26%	8,009.2	12%
Operational Budget Expenditure	14,369.6	18,167.3	26%	19,461.0	7%
Development/Capita Budget Expenditure	1,834.8	2,966.4	62%	4,472.3	51%
Total Expenditure	17,383.3	22,469.1	29%	25,419.8	13%

Source: Ministry of Finance.

Public sector's (including state corporations') finances are being affected by the financial and economic crisis through lower revenues, which are making it difficult for government and most of the corporations to maintain planned levels of public expenditures, including long-term infrastructure investment and social expenditures. The decline in central government's revenue has manifested itself in an increase in the 2009/10 budget deficit to 5% of GDP, from a deficit of 1% of GDP in 2008/09. The contraction in government revenue is attributable to reduced revenues from the mining industry, especially diamond, and reduced SACU receipts. While the effect of the global crisis on the mining industry was already factored in government revenue in March 2009, when the national budget was tabled, SACU receipts seem to be overstated and recently the Ministry of Finance announced SACU receipts may decline by more than N\$1 billion, pushing the budget deficit to more than 5% of GDP. Namibia's total debt declined to 18% of GDP in 2008, and with the rise in deficit, debt to GDP ratio projected to increase to 25% of GDP in 2009/10. This is still in line with the Government's debt benchmark of keeping debt to GDP ratio below 25%. Early indications on the fiscal policy front are that, Namibia might manage to go through the crisis while still maintaining the fiscal targets, despite an expansionary countercyclical fiscal policy implemented in the 2008/09 and 2009/10 budgets.

4. EARLY INDICATIONS OF THE EFFECTS OF THE CRISIS ON THE NAMIBIAN ECONOMY

4.1 Effects on Output of Goods

At the macro level, the global crisis has led to a significant slowdown in the rate of increase in output. The rate of increase in real GDP at constant 2004 prices declined from 5.5 percent over the four quarters of 2007 to 2.9 percent over the four quarters of 2008 (see Table 4.1). While there was no recession at the level of the whole economy in 2007 or 2008, some sectors of the economy realized output declines in some quarters of 2007 and 2008. The decline in output of agriculture increased from 0.7 percent in the second quarter of 2007 to 14.4 percent in the fourth quarter of the same year, before improving to a decline of 5.5 percent in the first quarter of 2008, followed by positive growth in the last three quarters of 2008. The fishing industry realized output declines in the first three quarters of 2007, followed by very strong recovery in the fourth quarter of 2007 and in the first quarter of 2008, before beginning to fluctuate in a declining trend to a very steep decline of 53.5 percent in the fourth quarter of 2008. Manufacturing output declined in the first and second quarters of 2007 and also in the third and fourth quarters of 2008.

Table 7.1 Percentage Change in Quarterly Real GDP at 2004 Constant Prices

	2007				2008			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Agriculture	4.1	-0.7	-0.9	-14.4	-5.5	2.3	0.2	9.0
Fishing	-26.4	-27.7	-22.5	19.5	26.7	3.2	-9.2	-53.5
Mining and Quarrying	27.1	-10.1	-23.1	11.7	-21.6	5.2	19.6	-4.8
Manufacturing	-38.9	-25.9	67.4	31.1	144.1	42.1	-51.3	-27.1
Electricity and water	8.1	1.1	19.3	-13.4	-1.9	22.6	-5.1	9.8
Construction	17.2	29.7	6.1	6.5	53.8	-7.9	0.2	17.7
Wholesale and retail	7.6	10.7	7.6	5.9	6.9	3.8	3.2	-1.5
Hotels and restaurants	36.4	-4.40	-8.3	27.2	23.8	34.5	-24.6	-22.5
Transport and Communication	5.6	9.20	5.6	1.4	4.6	0.8	5.5	11.2
Financial intermediation	7.2	8.5	17.2	14.8	16.8	14	5.2	5.1
Real Estate Activities and business	6.4	7.8	8.2	7.8	6.7	5.5	4.3	3.1

services								
Public Administration	9.4	10.6	11.3	11.6	11.4	10.4	8.8	6.6
Education	6.0	6.0	6.0	6.0	5.4	5.4	5.4	5.4
Health	4.0	17.3	8.9	-6.5	18.5	11.6	7.0	4.4
Other Private Services (less FISIM)	1.7	1.6	1.4	1.1	0.7	0.4	0.2	0.1
All Industries	1.6	0.2	11.6	8.0	17.7	9.8	-7.7	-2.1
GDP at Market Prices	2.3	0.80	10.7	7.5	15.8	8.7	-6.7	-2.2
GDP Annual percentage changes	5.5				2.9			

Source: GRN: National Accounts, Quarterly Gross Domestic Product Second Quarter 2009, National Planning Commission, Central Bureau of Statistics

Overall, the potential recession the economy could have got into in the third and fourth quarters of 2008 was averted by the good performance in the first and second quarters. But the crisis has negatively affected some of the key sectors of the Namibian economy, especially those that are predominantly export-oriented, such as the mining sector, tourism, and sections of the manufacturing sector that have driven growth over the past years. Mining companies have been forced to scale back production and lay off workers due to a decline in demand for mineral exports. Namibia's biggest diamond producer, NAMDEB, suspended its operations for three months, and only re-opened the mine in February 2009. It offered voluntary retrenchment packages to more than 800 employees. The decline in copper prices in November 2008 saw the closure of Namibia's only copper producer, Weatherly International, and the retrenchment of more than 600 workers. Affected mining firms have taken various actions including scaling back, and postponing implementation of planned mining investment projects. The slowdown in the mining sector (mainly in the diamond and copper industries), with production of diamonds projected to decline by 62 percent in 2009, will cause the sector to contract by 51 percent (see Table 4.2). In addition, the Ministry of Mines has reported that more than 1900 jobs had been lost in the mining sector over the period 2008-2009 due to the global crisis. With the exception of Weatherly Copper Mine that closed and has not re-opened, NAMDEB is now back in operation and has re-employed a substantial number of those who were retrenched in 2008. The Ministry of Mines has reported also that a substantial number of those who were retrenched by Weatherly Copper Mine were absorbed by the new uranium mining companies, and the Ohorongo Cement factory, which opened in 2008, with an initial staff compliment of 300. There are currently no signs of further retrenchment in the mining sector.

The manufacturing sector in Namibia, still recovering from the collapse of the textile industry following the closure of RAMATEX in 2006, has yet been affected again by both declining global demand and increases in the cost of imported inputs due in part to currency depreciation and rising oil prices. As noted earlier, performance of the manufacturing sector is closely linked to the performance of the fisheries, mining and agricultural sectors and, as a result of declines in output of these sectors, the manufacturing output growth declined significantly in 2008. Although factories are running at lower capacity, most companies in the sector have not retrenched and have no plans to retrench workers. The sector is however, expected to perform much better in 2009 to 2010, due to lower input costs, and increased output in the fishing and agricultural sectors.

The global crisis has caused a weakening of demand for Namibia's exports leading to a major decline in output of the mining sector, particularly diamond mining, whose output is projected to decline by 62.5 percent in 2009. This, according to the forecasts, will lead to a 27 percent contraction of the primary sector. The Bank of Namibia has, in view of this, revised Namibia's projected growth rate in 2009 downwards to -0.6 percent. If the global recovery that is being reported in developed economies does not take place at a faster pace, then demand for Namibia's exports is bound to continue weakening, with negative implications for agriculture, mining and manufacturing, and for the other sectors of the economy through their linkages with these three sectors.

Table 4.2: Real GDP & Sectoral Growth Forecasts.

	2003	2004	2005	2006	2007	2008	2009(E)	2010(E)
Agricultural & Forestry	-1.0%	7.6%	15.0%	3.8%	-4.6%	2.4%	3.8%	3.4%
Livestock	-2.4%	-1.6%	41.4%	-7.3%	2.8%	5.7%	3.5%	3.3%
Crop farming	1.8%	15.2%	-3.6%	15.2%	-10.7%	-0.8%	6.8%	5.2%
Fishing	10.0%	-7.0%	-8.3%	-8.8%	-19.0%	-5.3%	2.5%	3.0%
Mining and quarrying	-8.1%	45.0%	-10.8%	27.6%	0.5%	-1.7%	-51.0%	7.5%
Diamonds	-5.1%	44.9%	-16.6%	38.0%	-3.1%	-0.3%	-62.5%	6.6%
Other Mining	-	45.5%	17.3%	-8.5%	19.4%	-12.3%	2.0%	9.0%

	20.7%							
Manufacturing	13.8%	0.4%	7.5%	2.7%	8.4%	0.6%	2.6%	3.4%
Construction	27.3%	6.0%	2.5%	37.2%	14.5%	15.3%	18.0%	15.0%
Primary Industries	-1.5%	20.0%	-3.1%	12.8%	-4.0%	-1.4%	-27.0%	4.9%
Secondary industries	13.9%	2.0%	8.8%	8.1%	9.0%	3.3%	6.1%	6.2%
Tertiary Industries	6.9%	10.4%	2.1%	5.5%	7.7%	5.2%	4.1%	3.5%
GDP at market prices	4.2%	12.3%	2.5%	7.1%	5.5%	3.3%	-0.6%	4.2%

Source: Bank of Namibia, 2009.

The slowdown in the pace of output growth was also accompanied by changes in prices of some important commodities. The cost of maize, a staple food commodity in Namibia, more than doubled between 2005 and 2007, before falling only marginally by about 9.3 percent between 2007 and 2008 (Table 4.3). The cost of oil, another important import, also increased more than two-fold, from US\$ 38.28 per barrel in 2004 to US\$ 96.85 per barrel in 2008. This increase in the cost of oil triggered off increases in prices of many commodities consumed in Namibia, almost all of which come from South Africa, an oil importer. The global crisis led to a general fall in global prices of Namibia's exports with the exception of gold and beef, whose prices increased by 25.7 percent and 2.9 percent, respectively, between 2007 and 2008. Zinc and uranium realized the greatest price decreases of 42.15 percent and 27.27 percent, respectively. The price of diamonds, the most important export, decreased by 12.87 percent between 2006 and 2007, followed by an impressive increase of 24.88 percent between 2007 and 2008 (see Table 4.3).

Table 4.3: Average Prices of Selected Exports, 2004 – 2008.

Year	2004	2005	2006	2007	2008	%Δ 2006 - 2007	%Δ 2007 - 2008
Beef Average US\$/Kg	1.78	1.93	2.55	2.42	2.49	-5.00	2.91
Maize US\$/Ton	158.35	109.27	195.53	243.99	221.41	24.78	-9.26
Annual prices of Zinc in US\$ per tonne	1017.42	1384.69	3256.01	3240.86	1874.77	-0.47	-42.15
Copper Daily prices in US\$ per tonne	2764.5	3647.8	6719.45	7110.1	6945.18	5.81	-2.32
Gold/US\$/Ounce	409.22	440.40	605.98	694.11	872.47	14.54	25.70

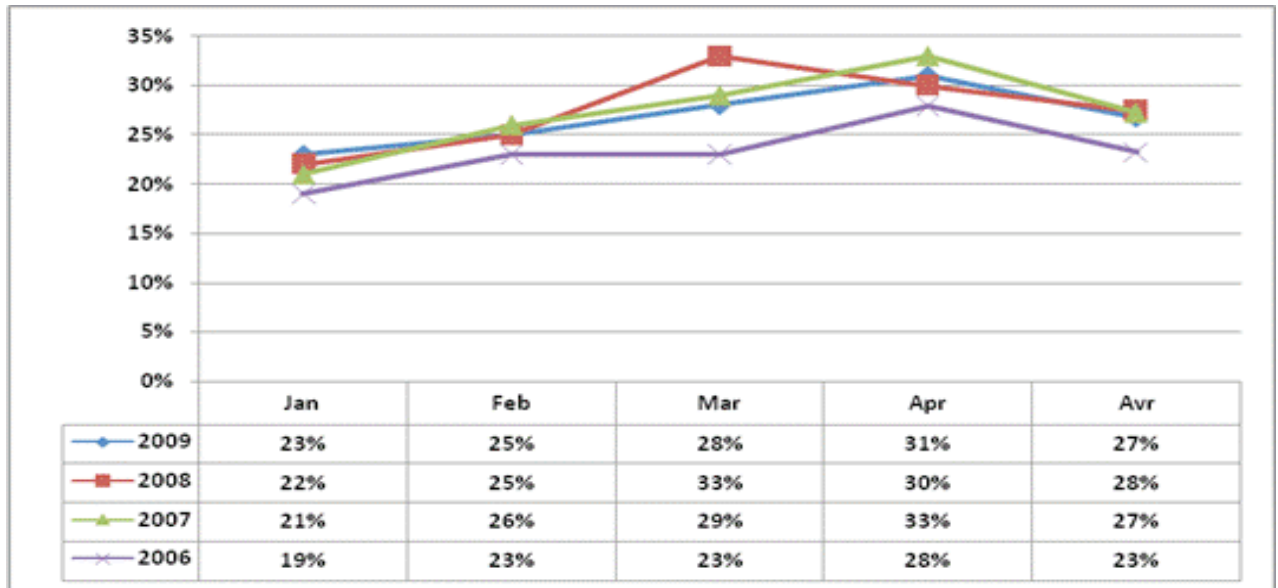
Uranium U\$/lb	18.97	28.17	48.05	95.44	69.41	98.63	-27.27
Oil, Brent Spot Prices US\$/barrel	38.28	54.42	65.21	71.83	96.85	10.15	34.83
Hake, Processed on Board U\$/mt	1903.88	2641.51	2524.52	3760.06	3453.51	48.94	-8.15
Diamonds U\$/Carat	358.28	398.28	403.47	351.53	438.99	-12.87	24.88

Source: NEPRU, Economic Indicators; Meat Board of Namibia, Market Statistics; Ministry of Fisheries and Marine Resources, Namibia Diamond Trading Company (NDTC), 2010.

4.2 Effects on Output of Services

In the service sector, tourism has been affected by the global crisis, with substantial declines in tourism arrivals and receipts, hotel bookings, and air travel. The decline in tourism activity is threatening to reverse recent gains in the service sector which is becoming an important driver of growth. The Bank of Namibia projects that the tourism sector has suffered a major setback from the global financial crisis. However, this has not been easy to establish. And on the contrary, recent statistics on Namibia inbound travel show an increase in the number of tourist arrivals. Data from Namibia Tourism Board (NTB) on bed occupancy rates, closures of lodges, and number of visitors, show that cheaper options have increased occupancy substantially in 2009. Self catering, hotel pensions, and bed and breakfast establishments have realized higher bed occupancy because they offer cheaper accommodation. Figure 4.1 presents the trends in the bed occupancy rate over the period 2006 – 2009.

Figure 4.1: Bed Occupancy Rate, 2006 - 2009



Source: Namibia Tourism Board, 2009.

The bed occupancy data used in Figure 4.1 are for the low tourism season, which normally has the lowest arrivals in Namibia. The figure shows that the bed nights did not go down but instead increased. No tourism operators laid off workers and, to the contrary, new operators started operating in 2009. According to the NTB, there have been no reported closures of lodges since the start of the global financial crisis. Although traditional markets such as the UK, Germany and other European countries, as well as USA, also the hardest hit by the global economic crisis, have shown a decline in the number of tourists visiting Namibia, there were also noticeable increases in the numbers of Japanese, Belgian and Norwegian tourists visiting Namibia in 2009 compared to 2008. A number of factors seem to have been in Namibia's favour. The disagreement over the 2007 election results in Kenya and the disturbances in other parts of the world made Namibia a preferred tourism destination. In addition, most lodges and hotels in Namibia introduced discounted rates and family specials for both local and international visitors. All these, coupled with currency depreciation over the first half of 2009 made many tourists to visit Namibia, despite the crisis.

In the wake of the global financial crisis, the biggest initial fear in the rest of the world was that of financial contagion. There are both direct and indirect ways in which this can happen. Directly, banks in developing countries may be affected through holding assets contaminated by

sub-prime mortgages. However, this does not appear to be a significant concern in Namibia. All Namibian banks have limited interrelationships with international banks, and most of the parent companies in South Africa had only minimum exposure to international banks or toxic assets. There is, however, a more serious indirect threat through declines in stock market prices and housing prices. These reduce the capital of banks (and of other big firms), which causes problems when they do not hold sufficient levels of their capital in cash. In such cases, it is likely that banks may reduce lending in order to shore up their capital. In a worst-case scenario, banks may face solvency problems and may require their governments to recapitalize them. Reductions in bank lending result in reduced investment, lower growth, and increased unemployment. Increased unemployment leads to a fall in aggregate demand for goods and services which, in turn, reduces economic growth further. The limited exposure of the local banking institutions to the markets afflicted by the crisis insulated the banking system from the direct impacts of the global financial crisis in 2008. Improved profitability in the second half of 2008 significantly boosted banking solvency and resilience. The average return on equity (ROE) in the banking sector rose substantially in the last six months of 2008, after a weakening in the first half of the same year. Similarly, capital adequacy ratios continued to exceed their regulatory requirements, a fact that bodes well for the stability of the banking sector. However, capital ratios have been falling, and rising overdue loans have been gathering pressure on non-performing loans (NPLs). Overall, the soundness of the Namibian banking sector remains intact. The banking sector's asset quality improved slightly during the first half of 2009. The NPL ratio fell from 3.1 percent in December 2008 to 3.0 percent at the end of June 2009. Growth in loans and advances during the period outpaced the growth in NPLs, resulting in the fall in the NPL ratio (NPLs as a percentage of the loan book). The ratio is still considered to be within the acceptable range.

The overall price index of the Namibia Stock Exchange (NSX), which comprises the performance of both local and dual-listed companies, fell sharply by 41.8 percent in the second half of 2008, from 956 points in June to 556 points in December 2008. The NSX overall index declined by 30.0 percent at the end of the third quarter of 2008 to close at 671 points, from 956 points at the end of the second quarter. The local index of the NSX was somewhat shielded from the turmoil in the global markets. The NSX overall index slowed further in the fourth quarter of 2008, following declines in share prices. The NSX overall index declined by 17.1 percent at the

end of the fourth quarter of 2008 to close at 556 points, from 671 points at the end of the third quarter of 2008.

4.3 Effects on the Household Sector

The immediate effect of the declining demand for Namibia's exports on the poor households depends to a large extent on the employment effects and direct linkages of export-oriented sectors to the domestic economy. The fewer the number of people who work in export-oriented industries and the more isolated the industries are from domestic industries, the less their decline will affect domestic industries and households. As mentioned above, the most affected sector is the mining sector with close to 8000 employees, and 1900 jobs were reported lost in the sector. However, the closure of companies will impact government revenue negatively, which might have adverse implications for government social spending programmes, and subsequently, adverse effects on the poor households. Prior to the global crisis, the incidence of poverty in Namibia had been on a declining trend, with the head count ratio declining from 0.58 in 1993/94 to 0.38 in 2003/04, and the poverty gap declining from 0.38 in 1993/94 to 0.13 in 2003/04.

Macroeconomic shocks are initially transmitted to the poor through changes in output (GDP), employment, wages and prices. These changes come through changes in aggregate demand, inflation, and macroeconomic volatility. The Namibian labour market consists of three segments, namely: the rural sector (agricultural sector), which continues to employ a sizable proportion of the labor force (27 percent, according to the 2004 Labour Force Survey); the formal (public and private) sector; and the informal sector, which is characterized by self-employment. According to the 2004 Labour Force Survey, the fishing sector employed 3.3 percent of the total labour force, while mining employed 2.0 percent and manufacturing employed 6.2 percent. Construction employed 5.1 percent of the labour force, while tourism, finance and government together employed 55 percent. Namibia's total labour force in 2004 was 385,329. In 2008, employment in the mining industry was reported to have increased to 8,800, an increase of about 1 000, as a result of new investments in the uranium industry, expansion in diamond production by NAMDEB, establishment of the Scorpion Zinc Mine and the re-opening the Ongopolo (Weatherly Mine) in Tsumeb. Although the mining sector was the only sector that

was directly affected by the crisis, the sector employs a small proportion of the labour force and, therefore, the crisis did not lead to massive unemployment and loss of income opportunities.

The crisis is likely to affect the well-being of the poor households in the medium-to-long-run. This is because domestic producers increase their prices in response to increases in import, including food, prices. Since the poor households spend much larger proportions of their incomes on food, they are more likely to be affected by rising food prices. Increases in global food and fuel prices in 2008 pushed inflation to double digits for the first time since 2002. Annual inflation increased to 10.3 percent in 2008, from 6.7 percent in 2007. Food price inflation, which accounts for 30 percent of the CPI inflation, peaked to 18 percent in the twelve months through October 2008, before declining to 16.5 percent in December 2008 and to 10 percent in September 2009. The decline in fuel prices in 2009 significantly dampened inflationary pressure, with inflation falling to 7 percent in December 2009. However, despite the decline in overall prices of goods and services, wages and salaries rose sharply with the government giving a salary increase of 24 percent to all government employees, while most companies in the private sector adjusted salaries by more than 7 percent. There were also attempts to protect poor households from possible negative effects of the crisis as prices of most of the basic food commodities consumed by the poor, such as bread, cooking oil, maize and maize meal, were reduced significantly by zero-rating VAT on them. The effects of this and other policy responses by the government are examined in the section that follows.

5. EFFECTS OF SOME RECENT GOVERNMENT POLICY RESPONSES

The government has taken several measures to address poverty and to alleviate the temporary impact of high food and fuel prices. These measures have included: zero-rating value-added tax on selected basic commodities; rebate provision for food importers; a food distribution programme to feed the poor and most vulnerable households; and a number of other tax and non-tax fiscal reforms. The government reaffirmed its commitment to combating poverty and expanding the social safety net by ensuring that the 2008/09 budget increased payments to the elderly, orphans, vulnerable children and war veterans. The macroeconomic outlook in 2008 was rather grim, with real GDP growth being projected to slow to -0.6% percent in 2009 if the weakening of the global demand for Namibia's exports and the high rate of inflation brought about by increasing food and fuel prices continued. However, the decline in world food and fuel prices towards the end of 2008 brought inflation rate down to single digit levels in 2009.

Several types of policy initiatives have been taken in an attempt to mitigate the spill-over effects of the global economic crisis on the Namibian economy. The government has formulated counter-cyclical fiscal expenditure programmes (mainly of a capital investment nature in economic and social infrastructure). It has also provided tax relief and subsidies to selected industries, and to corporations and individuals. The other tax and non-tax fiscal reforms announced by the Minister of Finance in the 2008/09 budget included:

- A 50 percent increase in the development budget over the Medium-Term Expenditure Framework (MTEF) period;
- Reduction of the corporate tax rate for non-mining companies from 35 percent to 34 percent;
- An increase in the tax exemption on retrenchment packages from N\$100,000 to N\$300,000;
- An increase in the tax-free amount on pension payout that can be taken as a lump sum from N\$20,000 to N\$50,000;
- An increase in the tax threshold from N\$36,000 to N\$40,000 to provide relief to low income earners;

- Reduction of the personal income tax rates for all tax brackets; and
- Introduction of a new tax rate of 37 percent for people earning annual incomes in excess of N\$750,000.

It is instructive to note that while acknowledging the possible short-term impact of the global financial crisis on Namibia, the government decided to address the crisis within the context of the existing macroeconomic framework, instead of fiscal stimulus packages adopted by developed economies. In the immediate term however, the government intends to pursue specific and targeted responses aimed at cushioning the effects of the crisis on the poor while minimizing macroeconomic instability. The government identified a number of projects for budget support operations to alleviate some of the pressure on the country's macroeconomic framework and to help free up resources for immediate responses to the crisis.

Policy reforms, like the ones instituted by the government can have impacts on the various economic entities through five main transmission channels: employment; prices; access to goods and services; assets; and transfers and taxes. Each policy reform however, is likely to have impacts through more than one channel. For example, utility reforms can result not only in changes in prices and access, but also in changes in the fiscal stance of the country, and hence, in transfers and taxes. Furthermore, different stakeholders are likely to be affected differently through these channels. For example, relative price changes can affect consumers and producers differently, and even among these groups the impact may vary. That is, consumers may be affected differently, depending on their consumption patterns and their ability to substitute goods.

5.1 Macroeconomic Policy Response

The Minister for Finance, when tabling the 2009/10 national budget in Parliament, announced that expansionary fiscal and monetary policy measures would be used in combination and be aligned to address and minimize the impact of the global financial crisis. The Minister said that appropriate counter-cyclical measures would be used to stave off potential recession and job losses, and that the specific fiscal policy measures to do so would, as far as possible, be coordinated with the other measures set out in the third National Development Plan (NDP 3), Vision 2030 and be sustainable over the medium-to-long-term. In addition, she emphasized that

significant resources would be provided for industrial policy interventions together with strong and robust use of trade measures.

In an attempt to quantify the possible effects of some of the afore-mentioned policy responses, Odada et.al (2009) have used a partial equilibrium model based on real sector equilibrium to derive numerical values of: the marginal tax rate (0.282) after factoring out the revenue effects of all the tax and non-tax reforms announced by the Minister of Finance in the 2008/09 budget; marginal propensity to consume out of disposable income (0.89); marginal propensity to import (0.543); and the multiplier which is applicable to changes in autonomous spending (1.1), to quantify decreases in revenue in the immediate-to-short-run arising from the tax-based fiscal reforms, and increases in revenue in the medium-to-long-run arising from the expansionary effects of the reforms. Taking 2008 as the reference year, they came up with a decline of N\$67.3 million in gross tax revenue that is attributable to the non-VAT tax reforms. Together with a 50 percent increase in development expenditure (N\$ 2,647 million in 2008), there is bound to be a decline of N\$1,390.8 (i.e. $67.3 + 1,323.5$) million in the balance of government budget that is attributable to the non-VAT fiscal reforms.

To obtain the revenue loss arising from the 2008 zero-rating of VAT on the basic commodities, Odada et.al (op.cit) used the 1993/94 and 2003/04 NHIES data to determine the average quantities of the zero-rated commodities consumed by a household in a year. These quantities were then multiplied by the standard VAT rate of 15 percent, to obtain the average amount of VAT that a household was paying on these commodities in a year, before the commodities were zero-rated in 2008. This average amount of VAT was then multiplied by the total number of households in the country, to get the total amount of VAT that all households were paying on all these commodities in a year before the commodities were zero-rated. This figure came to N\$310.4 million. Zero-rating of VAT on these commodities is thus expected to lead to a further reduction of the balance of government budget by an annual amount of N\$310.4 million. Total annual reduction of the balance of government budget that is attributable to the VAT and non-VAT fiscal reforms, therefore, amounts to N\$1,701.2 (i.e. $1390.8 + 310.4$) million. This is the figure that the government has to worry about in the immediate-to-short-run.

Zero-rating VAT on all the basic commodities that were zero-rated in 2008 will reduce the VAT paid by all Namibian households on all these commodities, before they were zero-rated, by N\$ 310.4 million per year. It is logical to assume that this is the annual increase in the disposable income of all households arising from the 2008 zero-rating. With a marginal propensity to consume out of disposable income of 0.89, total expenditure by households on goods and services will increase by N\$ 276.3 million per year. In the medium-to-long-run, after the economy will have had sufficient time to settle again, national income will have increased by this amount times the autonomous expenditure multiplier. That is, by $N\$ 276.3 \times 1.1$ million = N\$ 303.9 million per year. Taxes which are responsive to changes in the level of national income will have increased by this amount times the marginal tax rate ($t = 0.282$). That is, by 85.7 million per year as a result of zero-rating.

Furthermore, Odada *et.al* (op.cit) argue that since the fiscal policy reforms announced by Namibia's Minister of Finance in March 2009 included a 50% increase in annual development expenditure from the 2008/09 level of N\$2,647 million, this will have a further expansionary effect on national income, which by the time the economy settles again, will have increased national income by half of this amount times the autonomous expenditure multiplier. That is, by $N\$ 1,323.5 \times 1.1$ million = N\$ 1,455.9 million per year. Taxes which are responsive to changes in the level of national income will have increased by this amount times the marginal tax rate. That is, by $N\$ 1,455.9 \times 0.282$ million = N\$ 410.6 million per year. In addition to these, the non-VAT tax reforms reduce the tax burden by a further N\$ 67.3 million, which goes as an increase in households' disposable income. This leads to further increases of N\$ 59.9 million in consumption spending and N\$ 65.9 million in national income, thus generating an increase of N\$ 18.6 million in taxes which are responsive to changes in national income.

All the tax and non-tax fiscal reforms will have increased annual national income by N\$1,825.7 million and annual tax revenue by N\$514.9 million in the medium-to-long-run, after the expansionary effects of these reforms will have taken root throughout the economy. It has been mentioned that as a result of the VAT and non-VAT fiscal reforms, there will be a total annual decline of N\$ 1,701.2 million. This implies that even after realizing an annual tax revenue increase of N\$514.9 million in the medium-to-long-run, there will still remain a net annual revenue shortfall of N\$1,186.3 million, which is obviously unsustainable within the

government's stated fiscal targets of maintaining: public expenditure below 30 percent of GDP; budget deficit at or below 3 percent of GDP; and public debt at or below 25 percent of GDP.

5.2 Public Sector Infrastructure Investment Response

Public investment can affect growth through a variety of channels. First, public investment, particularly in infrastructure, may increase private capital formation and the overall rate of accumulation of physical capital. Second, public investment may affect output growth by influencing the rate of productivity growth, independently of its effect on capital accumulation. Physical capital may enhance the productivity of (skilled) human capital if there is, as is often the case, a high degree of complementarity between these factors of production. Similarly, if there is sufficient complementarity between the services produced by public capital in infrastructure and private physical capital, an increase in public investment outlays would not only lead to higher private investment (as argued earlier) but also make the existing stock of private capital more productive.

The government has realized that significant levels of public investment in infrastructure are one key means of responding to, and counteracting the effects of, the global financial crisis, and to this end, all state owned enterprises (SoEs) are being encouraged to fast-track implementation of most of the outstanding capital projects. The government believes that an increase in public sector infrastructure is likely to crowd in private sector investment, thus enabling the economy to absorb retrenched workers in other parts of the economy affected by the crisis. Both NAMWATER and NAMPOWER, two main utility SoEs, announced increased investment in infrastructure. In the 2009/10 budget, the government announced a substantial increase in public sector infrastructure investment amounting to N\$ 4.4 billion in 2009. The infrastructure investment programme included expanding and improving: the road and rail networks; water and sanitation infrastructure; low-cost housing; and energy generation capacity as well as education and health infrastructure. This programme is expected to create additional employment opportunities while meeting the basic needs of the society. The infrastructure investment is expected to be well spread across both urban and rural areas of the country, to ensure the best possible social and economic returns to society, and where possible, labour-intensive techniques of production will be used. In total, a major public investment programme

of approximately N\$12.5 billion is planned for the three fiscal years to March 2012. Further efforts will be made by all stakeholders to commit themselves to identifying mechanisms of supporting the public investment programme, including considering ways in which the implementation of public infrastructure projects could be fast tracked.

5.3 Industrial and Trade Policy Measures

The Namibian government convened a stakeholder's conference in early 2009 to discuss the impact of the global financial crisis and to formulate response strategies with inputs from the labour unions and the business sector. A Cabinet Committee chaired by the Minister of Trade and Industry was established at the beginning of 2009 to oversee the development of the crisis in the country. In addition, development finance institutions such as Agribank and the Development Bank of Namibia (DBN) were provided with financial resources and encouraged to place the promotion of productive employment and decent work opportunities at the centre of their lending mandates and to mobilize their available funds for the retention of employment and the creation of the largest possible number of jobs.

6. CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

The financial crisis has occurred at a time when many developing economies, including Namibia, had been enjoying years of good growth. Combining an impressive investment growth of 6.2 percent with improved macroeconomic management, Namibia was able to realize a real growth of 4.6 percent over the period 1990 – 2006, which was very good by the sub-Saharan Africa standard. This report identifies a number of channels through which the global financial crisis can affect the Namibian economy, and shows that the crisis can affect developing countries differently, depending on the extent of their vulnerability to the various channels. The resulting global economic slowdown has led to a weakening of demand for Namibia's exports and to a general fall in prices of these exports, with negative implications for growth and trade balance. Namibia's GDP growth contracted by 12.4 percent in the first quarter of 2009, and is estimated to have contracted by 0.6 percent over the whole of 2009. The effects of the crisis have been felt mainly in the mining and agricultural sectors, with mining and agricultural GDP estimated to have contracted by 51.0 percent and 3.8 percent, respectively, in 2009. In addition, the slump in global demand for mineral exports resulted in about 1,900 job losses in the mining industry. Even though the crisis has not led to a fall in bed occupancy rate due to the increases registered in bed occupancy in cheaper accommodation alternatives, the Bank of Namibia projects that tourism industry will contract by 5.0 percent in 2010, while the diamonds industry will contract by 6.6 percent.

The downside risks to the domestic outlook continue to be the possibility of a deepening and prolonged economic slowdown. The slump in the global economy will continue to limit export growth and adversely affect domestic economic growth. Slow economic activity will negatively affect both businesses and households, with possible adverse consequences for banking institutions and their financial stability.

To counter the possible negative effects of the financial and economic crisis, the government has put in place a number of tax and non-tax fiscal policy reforms. The potential effects of these fiscal reforms on national income and tax revenue are determined within a macroeconomic framework to obtain an estimate of annual revenue loss attributable to the fiscal reforms. One finding of the report is that taking 2008 as the reference year, the non-VAT tax reforms will reduce government revenue by N\$67.3 million per year, while the accompanying increase of 50 percent in development expenditure will reduce the balance of government budget by a further N\$1,323.5 million per year. That is to say, the non-VAT fiscal reforms will reduce the balance of government budget by N\$1,390.8 million per year. Together with a revenue loss of N\$310.4 million per year attributed to the 2008 zero-rating of VAT on basic commodities, all the fiscal reforms put in place in 2008 have the potential to reduce the balance of government budget by N\$1,701.2 million per year, which is the revenue shortfall the government has to worry about in the immediate-to-short-run. In the medium-to-long-run, all the tax and non-tax fiscal reforms will have increased annual national income by N\$1,825.7 million and annual tax revenue by N\$514.9 million. However, given that there will be an annual decline of N\$1,701.2 million in government budget, there will still be a revenue shortfall of N\$1,186.3 million after realizing the tax revenue increase of N\$514.9 million per year, which suggests that alternative sources of government revenue will be needed even in the medium-to-log-run, after the expansionary effects of the fiscal reforms will have taken root throughout the economy.

However, since Namibia is a member of SACU, it does not have discretion over taxes on international trade, and alternative sources of revenue can only be found in direct taxes on income and profit, and in other minor sources of revenue like registration and immigration fees. Given that direct taxes on income and profit were reduced by one percentage point in response to the crisis, increasing them would undo their intended expansionary effect and may not be politically and socially prudent. Also given that registration and immigration fees were only recently increased two-to-threefold, thus making them higher in Namibia than in other countries of the Southern Africa Development Community (SADC), increasing them further do not present a realistic option. Tax revenue accounts for over 90 percent of total government revenue, with the other sources of revenue (including grants) accounting for less than 10 percent. This suggests that increasing revenue from these other sources is also not a viable option. Therefore the only options the government is left with are external borrowing and the recall of foreign

exchange reserves held in other countries, if the crowding-out effects of increased domestic borrowing by the government are to be avoided.

As has been outlined before, the current global financial crisis was triggered off by private debts (sub-prime loans) and not by government debts and it did not originate from a developing country, but from a developed, USA. The lesson that could be learnt from this crisis, as compared to previous crises underpinned by public sector debts, is that macroeconomic policies aimed at reducing financial risks have got differential impacts in different countries, depending on the relative importance of private capital inflows in their economies. More than 65 percent of Namibia's savings are of long-term contractual nature (pension funds, insurance companies, banks and unit trusts), and are invested in other countries on the assumption that these countries have better risk management systems and that they offer higher returns to financial investment. This makes Namibia a net exporter of capital and, therefore, less vulnerable to the shocks of external financial crises.

The limited exposure of Namibia's banking institutions to the markets afflicted by the crisis insulated the banking system from the direct impacts of the global financial crisis. Improved profitability in the second half of 2008 significantly boosted banking solvency and resilience. The average return on equity (ROE) in the banking sector rose substantially in the second half of 2008, after a weakening in the first half of the same year. Similarly, capital adequacy ratios continued to exceed their regulatory requirements, a fact that bodes well for the stability of the banking sector. Overall, the soundness of the Namibian banking sector remains intact. The banking sector's asset quality improved slightly during the first half of 2009. The NPL ratio fell from 3.1 percent in December 2008 to 3.0 percent at the end of June 2009. Growth in loans and advances during the period outpaced the growth in NPLs, resulting in the fall in the NPL ratio (NPLs as a percentage of the loan book). The ratio is still considered to be within the acceptable range. In this regard, the sound management and prudence of the CMA is laudable, because they have so far insulated the financial sectors of member states from the effects of the global financial crisis.

Declines in the world commodity prices are bound to be detrimental to Namibia's export performance because Namibia is a major exporter of minerals, beef and fish. Over the period

2004 – 2006, prices of many minerals, including copper, uranium, nickel, diamonds and platinum rose to record highs, and contributed significantly to growth in Namibia. However, from 2007 to 2008, prices of most of these commodities declined. As the prices of these commodities declined, South Africa, already with a large balance-of-payments deficit, faced further pressure on its trade account, which saw the value of the Rand/N\$ currency, declining precipitously further, by almost 40 per cent, against the US dollar.

The crisis has shown how important credit and risk management institutions and their policies are to economic growth, and it has shown how important appropriate institutions (including appropriate regulation) are for the effective functioning of the financial sector. Furthermore, it has shown how important the international financial architecture, including international cooperation, is for mitigating financial crises. An important lesson to be learnt from the crisis is that financial development in developing countries should begin to focus urgently on both domestic financial deepening and broadening.

Increases in global food and fuel prices in 2008 pushed inflation to double digit levels in Namibia for the first time since 2002. Annual inflation increased to 10.3 percent in 2008 from 6.7 percent in 2007. Food price inflation, which accounts for 30 percent of the CPI inflation, peaked to 18 percent in the twelve months through October 2008, before declining to 16.5 percent in December 2008 due to a decline in a global food prices. In addition, a decline in global fuel prices in the second half of 2008 is expected to significantly dampen further inflationary pressure. However, the sharp depreciation of the Namibian dollar in 2009, may limit the full-pass-through of the oil price effect into domestic prices. Domestic price developments in Namibia continue to closely follow the path of inflation in South Africa, mainly due to exchange rate parity and the strong trade and financial linkages between the two economies.

The overall index of the NSX was again negatively affected by the turmoil in the global financial markets in the second half of 2008, with the most impact coming through the Johannesburg Stock Exchange (JSE). However, the impact on the local component of the NSX continued to be modest during the period under review. Furthermore, the effect of the decline in the NSX on the banking institutions remained limited, as these institutions do not invest in equities.

The exchange rate peg to the rand remains a strong monetary policy anchor and has enabled Namibia to maintain a stable macroeconomic environment. The Bank of Namibia has found some room to deviate from the interest rate policy of the SARB, although the peg and close financial links with South Africa are likely to constrain the scope for effective independent monetary policy over the long-term. It will be important to maintain sufficient international reserves and monitor capital flows closely to allow timely adjustment of interest rates. At present, staff's analysis does not indicate substantial risks to external stability and the real exchange rate appears broadly in line with equilibrium.

6.2 Recommendations

Since Namibia does not get as much official development assistance (ODA) as some other developing countries for budgetary support because it is classified as an upper middle-income country, foreign aid has played an insignificant role in complementing Namibia's limited domestic resources. In the recent years, however, ODA volumes have increased and more commitments have been made by the advanced economies (G8) for stepped up assistance to Namibia. At the same time, efforts are being made by the developed countries to release ODA commitments in an improved delivery mode to enable developing countries achieve the Millennium Development Goals (MDGs). With the projected decline in mining (diamonds) tax revenue, and the projected decline in SACU receipts however, ODA is likely to become increasingly important in achieving Namibia's development objectives. However, this hope might be lost in the next few years, as developed countries try to resuscitate their own economies. This leaves Namibia with only the World Bank and the International Monetary Fund (IMF) as important options for external borrowing. The fiscal reforms that Namibia has put in place are, to say the least, ambitious, and as a member of the United Nations, Namibia should not deny itself the relatively cheap loans that these United Nations institutions offer if such monies are to be put to productive use thus enabling the country to repay its loans. This option should not preclude sourcing of cheap loans from other sources so as the country is able to carry out due diligence and not over commit itself beyond its ability to repay and thus increase the debt burden.

The crisis is expected to set back or reverse efforts to alleviate poverty in Namibia, after some successes achieved over the past 10 years. The number of Namibians living in poverty is thought to have decreased in terms of the poverty head count that has declined from 58 to 38. The impact of the crisis in Namibia may be further compounded by the effects of the 2008 food crisis, which made many Namibian families more vulnerable to sudden economic shocks, especially as domestic prices of fuel and food remain high. Government social safety nets are expected to be further strained by a projected increase in the number of beneficiaries and likely revenue pressure on government revenue. There will thus be need for increasing the existing social safety nets, both in terms of coverage and targeting of the poor and vulnerable, for greater impact. It may also be necessary to consider revisiting the scope of these safety nets.

The Bank of Namibia needs to ensure the availability of sufficient information to gauge the likely effects of future global crises on the Namibian economy, and to identify, design, and implement policy measures that can best avoid such risks. Deficiencies in information and analysis can lead to over-reaction or under-reaction, which can result in policy and market failures. There is also a need to strengthen monetary and financial stability, regional cooperation, and information exchange, to improve statistical transparency and timeliness of data in order to avoid the risk of financial turmoil. In this regard, institutions like the Bank of Namibia should initiate the construction of Early Warning System (EWS) models, which apply statistical methods to predict the likelihood that an economy would face a financial crisis over a given time horizon.

Another area that requires careful consideration is revisiting policy to help arrest declining trends in agricultural value addition and create dynamism in the rural sector; given rising frequency and severity of floods, droughts and famine, growing population pressure against a fixed land base. Top priority needs to be given to resolving the food insecurity issue by reviewing the land tenure system; parallel to improving productivity in rural areas. Other issues that need to be addressed urgently are the issues of diversification and structural transformation of the economy; to reduce the current heavy dependence on imports to satisfy domestic demand, and on primary industries for generating employment, incomes and foreign exchange.

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APPENDIX 1: THEORETICAL FRAMEWORK OF THE NAMEX MODEL

This macro-econometric model is built to provide a theoretical structure for understanding the linkages between the key macroeconomic variables. The following four sectors of the Namibian economy are modeled: the real sector, including the external sector; the fiscal sector consisting of government revenue and government expenditure; the monetary sector dealing with the estimation of the main monetary variables, namely the broad monetary aggregate, M2, domestic credit and net foreign assets; and the prices sector, which tries to capture the factors influencing domestic price level. The labour sector could not be estimated due to unavailability of data.

1.1. Real Sector

The income-expenditure identity is the starting point for specifying the real sector of an economy:

$$Y_t = C_t + I_t + G_t + X_t - M_t \quad \dots\dots(1)$$

Where: Y_t is real GDP, C_t is real private consumption expenditure, I_t is real private investment expenditure and G_t is real government expenditure. X_t denotes real exports and M_t represents real imports

The specification of the underlying equations is presented, starting with private consumption.

Private consumption (C_t) is a function of the following variables:

$$C_t = C(C_t^d, C_t^e, C_t^g); \quad \dots\dots (2)$$

Where: C_t^d is total disposable income, which is defined as the difference between gross domestic product (Y_t), as a proxy for national income and total domestic taxes (T_t):

$$C_t^d = Y_t - T_t \quad \dots\dots (3)$$

According to the Keynesian absolute-income hypothesis, disposable income is assumed to have a positive influence on private consumption. Later theories, such as the life-cycle hypothesis and

the permanent-income hypothesis, have introduced other explanatory variables like real interest rate (r) and inflation rate (π), whose impacts cannot be predetermined *a priori*. Since real interest rate is composed of nominal interest rate and inflation rate, r and π should not be considered simultaneously.

Private investment can be influenced by the following factors:

$$I_t = I_0 + \Delta K_t - 1, P_t, R_t, \dots \dots \dots (4)$$

Where: ΔK_t is change in capital stock and P_t is world price index, defined as weighted consumer price index of the five major trading partners. The world price index is included because most of the goods produced through investment are exported. R_t and P_t are supposed to have positive impacts on investment, while real interest rate should have a negative impact on private investment.

Government expenditure is assumed to be an exogenous variable and is determined as the sum of public consumption (G_t) and public investment (I_g), i.e.

$$G_t = G_0 + I_g \dots \dots \dots (5).$$

The specification of the export function is based on the assumption that Namibia is a small country, which implies that exports by Namibia will have little effect on prices in the world market. A small country can sell as much as it likes without depressing prices in the world market. Hence, the demand for exports of goods and services is determined by the world demand and the country's competitiveness. That leads to the following functional form:

$$X_t = X_0, P_t, R_t \dots \dots \dots (6)$$

Exports of goods and services is denoted by X_t , world income by Y_t and the real exchange rate by R_t , which is used as a proxy for the competitiveness of the country in international trade. These variables are assumed to yield a positive and a negative impact, respectively. An increase in the real exchange rate, i.e. a real appreciation leads to a fall in demand for exports.

Imports of goods and services in Namibia, denoted by M_t , are assumed to be determined by domestic demand that is proxied by gross domestic expenditure

(*GDEt*) and the relative price level, which is defined as the ratio of the import price index (*MPIt*) to the consumer price index (*CPIt*). Since the vast majority of imports come from South Africa and the Namibian dollar is at par with the South African Rand, the nominal exchange rate does not have to be taken into account. Therefore, only the relative price level serves as a proxy for competitiveness, yielding the following functional form:

$$I_t = f(GDE_t, R_{t-1}) \dots\dots\dots(7)$$

Gross domestic expenditure is expected to influence demand for imports positively, while changes in the relative price level should have negative impacts on demand for imports.

1.2. Fiscal Sector

The fiscal sector constitutes government revenue and government spending. Budget deficit comes as excess government expenditure over government revenue, and is usually financed from both domestic and external sources. Hence, gross fiscal budget deficit (*BUDEFNt*) is defined as follows:

$$BUDEFN_t = TGEN_t - TGRN_t \dots\dots\dots(8)$$

Where *TGENt* is total government expenditure and *TGRNt* is total government revenue.

Specification of the equations in the fiscal sector are chosen to emphasize the link between the fiscal and the real, monetary, and price sectors. Public sector borrowing requirements are determined by this sector through the gross fiscal deficit, which in turn influences the other sectors. In addition, the fiscal and the real sectors are connected via nominal output, which is used as a scale variable in many fiscal sector equations.

Total government revenue is the sum of direct taxes (*TDXNt*), indirect taxes (*TNDXNt*) and non-tax revenue of the government (*NTRNt*):

$$TGRN_t = TDN_t + TNDXN_t + NTRN_t \dots\dots\dots (9)$$

Direct and indirect taxes are modeled as endogenous variables, while non-tax revenue of the government is treated as exogenous.

Direct taxes may be influenced by nominal output, the average direct tax rate ($\frac{T}{Y}$), which is defined as the ratio of total direct taxes to nominal output and the inflation rate, yielding:

$$\frac{T}{Y} = \frac{T}{Y}, \frac{T}{Y}, \frac{T}{Y} \dots\dots\dots(10)$$

An increase in nominal output is expected to increase revenue from direct taxes. Given a progressive structure of direct taxation, economic agents will have to pay higher proportions of their incomes in the form of taxes as their incomes increase. Likewise, direct tax revenue will go up as the average direct tax rate increases. The assumed positive relationship between direct taxes and the inflation rate can be explained by the fact that each year public and private sector employees' compensation is adjusted for cost of living allowance and the additional compensation is taxed.

Indirect taxes can as well be influenced by nominal output, the average indirect tax rate ($\frac{T}{Y}$), defined as the ratio of total indirect taxes to nominal output, and the inflation rate:

$$\frac{T}{Y} = \frac{T}{Y}, \frac{T}{Y}, \frac{T}{Y} \dots\dots\dots(11)$$

The largest proportion of indirect taxes is raised in form of VAT (which replaced the Sales Tax in 2000), therefore, a higher price level will contribute to a higher indirect tax revenue. Because of the high share of VAT in indirect tax revenue, nominal output is used, instead of consumption, as a scale variable, because production and consumption are influenced by VAT. A higher nominal output is expected to lead to an increase in total indirect taxes due to higher spending. The positive relationship between total indirect taxes and the average tax rate is straightforward.

Total government expenditure can be subdivided into current expenditure and capital expenditure. Government current expenditure comprises wages and salaries (G_c), expenditure on goods and services (G_g), interest payments on (internal and external) debt (G_i) and subsidies and transfers (G_s).

Total government expenditure is therefore given by:

$$G_t = G_{t-1} + \alpha_1 \Delta G_{t-1} + \alpha_2 \Delta^2 G_{t-1} + \alpha_3 \Delta G_{t-1} + \alpha_4 \Delta G_{t-1} + \alpha_5 \Delta G_{t-1} \dots (12)$$

Where G_t is government capital expenditure. Except government expenditure on goods and services, all other variables are taken as exogenous variables within the model.

Government expenditure on goods and services is a function of nominal GDP and the inflation rate. As nominal GDP increases, expenditure on goods and services is also expected to increase. A rise in the prices would lead to increased government spending, as the same volume of goods and services becomes more costly. The following functional form results:

$$G_t = f(G_{t-1}, \pi_t) \dots (13).$$

1.3. Financial Sector

The demand for real broad money (M2) is assumed to be positively related to the level of income. When the level of income increases, economic agents are likely to hold more money. Since M2 is the broadest monetary aggregate in Namibia, it is not likely that economic agents can shift their money holdings out of M2. Not unless opportunity cost of holding money is introduced. One factor influencing demand for M2 is the own rate of that money aggregate, which is defined as the return to the components of the aggregate itself, and is assumed to have a positive influence on demand for money. Moreover, inflation rate has a decisive influence on demand for money. When inflation rate is high, people will rather invest in real assets than hold money. The functional form is, therefore:

$$M_t = f(r_t, \pi_t) \dots (14)$$

Where r_t is the own rate of money.

1.4. Prices Sector

A key assumption underlying the construction of the domestic consumer price index (*CPI*) in Namibia is that it is strongly influenced by import prices. This is due to the fact that Namibia imports about 80 percent of goods from South Africa. This influence can be captured by the import price index (*MPI*). Furthermore, there is assumed to be a long-run relationship between prices and nominal wages (*WN*). The functional form for the consumer price index is therefore as follows:

$$\Delta \ln CPI = \alpha_0 + \alpha_1 \ln CPI_{t-1} + \alpha_2 \Delta \ln CPI_{t-1} + \alpha_3 \ln CPI_{t-2} + \alpha_4 \Delta \ln CPI_{t-2} + \alpha_5 \ln CPI_{t-3} + \alpha_6 \Delta \ln CPI_{t-3} + \alpha_7 \ln CPI_{t-4} + \alpha_8 \Delta \ln CPI_{t-4} + \alpha_9 \ln CPI_{t-5} + \alpha_{10} \Delta \ln CPI_{t-5} + \alpha_{11} \ln CPI_{t-6} + \alpha_{12} \Delta \ln CPI_{t-6} + \alpha_{13} \ln CPI_{t-7} + \alpha_{14} \Delta \ln CPI_{t-7} + \alpha_{15} \ln CPI_{t-8} + \alpha_{16} \Delta \ln CPI_{t-8} + \alpha_{17} \ln CPI_{t-9} + \alpha_{18} \Delta \ln CPI_{t-9} + \alpha_{19} \ln CPI_{t-10} + \alpha_{20} \Delta \ln CPI_{t-10} + \alpha_{21} \ln CPI_{t-11} + \alpha_{22} \Delta \ln CPI_{t-11} + \alpha_{23} \ln CPI_{t-12} + \alpha_{24} \Delta \ln CPI_{t-12} + \alpha_{25} \ln CPI_{t-13} + \alpha_{26} \Delta \ln CPI_{t-13} + \alpha_{27} \ln CPI_{t-14} + \alpha_{28} \Delta \ln CPI_{t-14} + \alpha_{29} \ln CPI_{t-15} + \alpha_{30} \Delta \ln CPI_{t-15} + \alpha_{31} \ln CPI_{t-16} + \alpha_{32} \Delta \ln CPI_{t-16} + \alpha_{33} \ln CPI_{t-17} + \alpha_{34} \Delta \ln CPI_{t-17} + \alpha_{35} \ln CPI_{t-18} + \alpha_{36} \Delta \ln CPI_{t-18} + \alpha_{37} \ln CPI_{t-19} + \alpha_{38} \Delta \ln CPI_{t-19} + \alpha_{39} \ln CPI_{t-20} + \alpha_{40} \Delta \ln CPI_{t-20} + \alpha_{41} \ln CPI_{t-21} + \alpha_{42} \Delta \ln CPI_{t-21} + \alpha_{43} \ln CPI_{t-22} + \alpha_{44} \Delta \ln CPI_{t-22} + \alpha_{45} \ln CPI_{t-23} + \alpha_{46} \Delta \ln CPI_{t-23} + \alpha_{47} \ln CPI_{t-24} + \alpha_{48} \Delta \ln CPI_{t-24} + \alpha_{49} \ln CPI_{t-25} + \alpha_{50} \Delta \ln CPI_{t-25} + \alpha_{51} \ln CPI_{t-26} + \alpha_{52} \Delta \ln CPI_{t-26} + \alpha_{53} \ln CPI_{t-27} + \alpha_{54} \Delta \ln CPI_{t-27} + \alpha_{55} \ln CPI_{t-28} + \alpha_{56} \Delta \ln CPI_{t-28} + \alpha_{57} \ln CPI_{t-29} + \alpha_{58} \Delta \ln CPI_{t-29} + \alpha_{59} \ln CPI_{t-30} + \alpha_{60} \Delta \ln CPI_{t-30} + \alpha_{61} \ln CPI_{t-31} + \alpha_{62} \Delta \ln CPI_{t-31} + \alpha_{63} \ln CPI_{t-32} + \alpha_{64} \Delta \ln CPI_{t-32} + \alpha_{65} \ln CPI_{t-33} + \alpha_{66} \Delta \ln CPI_{t-33} + \alpha_{67} \ln CPI_{t-34} + \alpha_{68} \Delta \ln CPI_{t-34} + \alpha_{69} \ln CPI_{t-35} + \alpha_{70} \Delta \ln CPI_{t-35} + \alpha_{71} \ln CPI_{t-36} + \alpha_{72} \Delta \ln CPI_{t-36} + \alpha_{73} \ln CPI_{t-37} + \alpha_{74} \Delta \ln CPI_{t-37} + \alpha_{75} \ln CPI_{t-38} + \alpha_{76} \Delta \ln CPI_{t-38} + \alpha_{77} \ln CPI_{t-39} + \alpha_{78} \Delta \ln CPI_{t-39} + \alpha_{79} \ln CPI_{t-40} + \alpha_{80} \Delta \ln CPI_{t-40} + \alpha_{81} \ln CPI_{t-41} + \alpha_{82} \Delta \ln CPI_{t-41} + \alpha_{83} \ln CPI_{t-42} + \alpha_{84} \Delta \ln CPI_{t-42} + \alpha_{85} \ln CPI_{t-43} + \alpha_{86} \Delta \ln CPI_{t-43} + \alpha_{87} \ln CPI_{t-44} + \alpha_{88} \Delta \ln CPI_{t-44} + \alpha_{89} \ln CPI_{t-45} + \alpha_{90} \Delta \ln CPI_{t-45} + \alpha_{91} \ln CPI_{t-46} + \alpha_{92} \Delta \ln CPI_{t-46} + \alpha_{93} \ln CPI_{t-47} + \alpha_{94} \Delta \ln CPI_{t-47} + \alpha_{95} \ln CPI_{t-48} + \alpha_{96} \Delta \ln CPI_{t-48} + \alpha_{97} \ln CPI_{t-49} + \alpha_{98} \Delta \ln CPI_{t-49} + \alpha_{99} \ln CPI_{t-50} + \alpha_{100} \Delta \ln CPI_{t-50} + \epsilon_t \quad (15)$$

Both variables are expected to have positive effects on the Namibian consumer price index.

1.5 Single Equations Estimation Results

The estimated behavioural equations of the model are presented below. The diagnostic test statistics indicate that there is no evidence of serial correlation, of autoregressive conditional heteroskedasticity and non-normality of the residuals. These tests broadly confirm that the estimated equations do not show evident signs of misspecification. The residuals from these regressions are interpreted as disequilibrium terms measuring the discrepancies between actual values of the variables and their long-run equilibrium values. Such residuals are tested for stationarity using the ADF test statistic and the results show that the residuals are stationary, that is, there is cointegration.

The speed of adjustment, which is the coefficient of the lagged independent variable of the dependent variable coefficient, is negative and significant and this means that the short-run dynamics adjust into the long run equilibrium instead of moving away from the equilibrium path. The size of the coefficient depicts the magnitude of the disequilibrium that is corrected every year.

a) Private Consumption

Private consumption is estimated using the one-step procedure that simultaneously estimates the long-run path and the short-run dynamics. The Keynesian absolute-income hypothesis, which postulates the positive relationship between disposable income and private consumption, is the foundation for the private consumption equation. In the model, real disposable income is considered to be both the long-run and short-run determinant of private consumption and it validates the theory that it has the positive influence on consumption. The dummy variables dumconsp and dumind are introduced to capture or account for the outliers during 1985 and for the effects of independence in 1990, respectively:

$$\Delta \ln PC = -0.1928 - 0.8551 \ln PC_{t-1} + 0.7698 \Delta \ln PC_{t-1} - 0.8551 \ln PC_{t-2} + 0.7698 \Delta \ln PC_{t-2} + \dots (16)$$

(0.32) (-5.03) (4.38) (-3.64)

$R^2=0.5469$ $S.E. = 0.05$ $ARCH = 0.5496 (1)$ $JB = 0.1693$ $DW = 1.93$ $RESET = 0.3729$

Sample size = 25 Breusch-Godfrey serial correlation test = 0.2633 (2)

List of variables:

C = Private Consumption

YD = Total Disposable Income

$Shift$ = Shift Dummy, (1983-1989=0, otherwise =1)

b) Private Investment

In the private investment equation, domestic demand and world consumer price index are used as independent variables.

$$\Delta \ln I_{t-1} = -0.8098 \Delta \ln I_{t-1} - 0.4191 \ln YD_{t-1} - 8.6236 + 2.3771 \Delta \ln YD_{t-1} + 6.6667 \Delta \ln WCPI_{t-1} - 0.3757 \ln Shift_{t-1} \dots \dots \dots (17)$$

(-4.74)	(-4.51)	(-3.67)	(4.97)
(2.80)	(-4.28)		

$R^2=0.6996$ S.E. =0.11 ARCH = 0.1874 (1) JB = 1.5206 DW = 1.79 RESET = 0.7102

Sample size = 25 Breusch-Godfrey serial correlation test = 0.8248 (2)

List of variables:

$INVP$ = Private Investment

GBY = Government Bond Yield

K = Capital Stock

$WCPI$ = World Consumer Price Index (for 5 major trading partners)¹

$DUMINV$ = Dummy Variable to capture the outliers

c) Exports

Motivated by the trading alliances, the world income of the major trading partners is included in the equation along with the real exchange rate, as a proxy for the country's competitiveness. Dummy variables are included in the specification to incorporate the qualitative explanatory

variable in the model and account for the outliers. As expected, an increase (real appreciation) in the real exchange rate decreases exports.

$$\Delta X_t = -0.5227 \Delta X_{t-1} + 0.5615 \Delta X_{t-2} + 2.4346 \Delta X_{t-3} - 0.5073 \Delta X_{t-4} - 0.2597 \Delta X_{t-5} - 0.0945 \Delta X_{t-6} + 2.0000 \Delta X_{t-7} + \dots \dots \dots (18)$$

(-4.04)
(2.47)
(3.95)
(-3.70)
(-4.12)

(-2.40)

$R^2=0.6257$ S.E. =0.06 ARCH = 0.5496 (1) JB = 0.1693 DW = 1.93 RESET = 0.3729

Sample size = 26 Breusch-Godfrey serial correlation test = 0.2633 (2)

List of variables:

X = Exports

ΔX_t = World Income (for 5 major trading partners)

RER = Real Exchange Rate

DUMX = Dummy Variable to capture the outliers

DUM2000 = Dummy Variable to capture the outliers

d) Imports

Imports of goods and services are specified as a function of gross domestic expenditure along with the dummy variable.

$$\Delta M_t = -0.4729 \Delta M_{t-1} + 0.4353 \Delta M_{t-2} - 2.1570 \Delta M_{t-3} + 0.9251 \Delta M_{t-4} - 0.0877 \Delta M_{t-5}$$

(-1.99)
(2.23)
(-2.54)
(1.54)
(-1.44)

$R^2=0.5790$ S.E. =0.06 ARCH = 0.5496 (1) JB = 0.1693 DW = 1.93 RESET = 0.3729

Sample size = 26 Breusch-Godfrey serial correlation test = 0.2633 (2)

List of variables:

M = Imports

GDE = Gross Domestic Expenditure

DUMM = Dummy Variable to capture the outliers in the series

e) Total direct tax revenue

Total direct tax revenue is estimated as a function of the average direct tax rate, defined as the ratio of total direct taxes to nominal output. As expected, there is a positive relation between the two. Nominal GDP and inflation rate turned out to be statistically insignificant.

$$\Delta \ln TDXN = -0.1748 \Delta \ln AVGTDX - 1 - 0.2488 + 0.1291 \Delta \ln DUMIND + 0.782 \Delta \ln GDP - 0.0706 (\Delta \ln INFL)$$

(-2.46)
(-1.31)
(2.44)
(17.63)

(-2.58)

$$R^2 = 0.9611 \quad S.E. = 0.03 \quad ARCH = 0.5496 (1) \quad JB = 0.1693 \quad DW = 1.93 \quad RESET = 0.3729$$

$$Sample\ size = 25 \quad Breusch-Godfrey\ serial\ correlation\ test = 0.2633 (2)$$

List of variables:

TDXN = Total Direct Tax Revenue

AVGTDX = Average Total Direct Tax Rate

DUMIND = Dummy Variable to capture the outliers during the independence

f) Total indirect tax revenue

Since this component is likely to be influenced by nationwide economic activities, the total indirect tax revenue is regressed on nominal GDP and the coefficient is found to be statistically significant.

$$\Delta \ln ITXN = -0.7379 (\Delta \ln GDP - 1) + 2.2366 + 0.8316 (\Delta \ln GDP - 1)$$

(-8.45)
(5.19)
(2.72)

$$+ 0.1351 \Delta \ln GDP - 0.0425 \Delta \ln GDP * \Delta \ln GDP + (0.2412) \Delta \ln GDP$$

(6.21)
(-3.08)
(2.15)

$$R^2 = 0.8876 \quad S.E. = 0.04 \quad ARCH = 0.5496 (1) \quad JB = 0.1693 \quad DW = 1.93 \quad RESET = 0.3729$$

$$Sample\ size = 25 \quad Breusch-Godfrey\ serial\ correlation\ test = 0.2633 (2)$$

List of variables:

TNDXN = Total Direct Tax Revenue

GDPN = Nominal Gross Domestic Product

DUMIND = Dummy Variable to capture the outliers during the independence

@TREND = Linear Time Trend

g) Government expenditure on goods and services

Theoretically government expenditure on goods and services is explained by nominal GDP and price levels. However, in this instance nominal GDP was found to be insignificant.

$$\begin{aligned} \Delta \ln GEGSN = & -0.2357(\ln GEGSN_{t-1}) + 0.3381(\ln GDPN_t) + 0.8391 \\ & (-4.73) \quad (2.74) \quad (4.58) \\ & -0.2319(\ln CPI_t) + 0.1892(\ln GEGSN_{t-1}) \\ & (-5.27) \quad (-1.92) \end{aligned}$$

$R^2=0.7022$ S.E. = 0.06 ARCH = 0.5496 (1) JB = 0.1693 DW = 1.93 RESET = 0.3729

Sample size = 25 Breusch-Godfrey serial correlation test = 0.2633 (2)

List of variables:

GEGSN = Government Expenditure on goods and services

CPI = Consumer Price Index

DUMIND; DUMIND = Dummy Variables to capture the outliers.

h) Money demand

The main long-run determinant of the broad money is the level of consumer price index as per theoretical prediction has a negative relation. In principle, interest rates and real income should also be included as endogenous variables, but both have no significant explanatory power in the demand for money equation.

$$\Delta \ln M2 = -0.4997 \ln M2_{t-1} - 0.6523 (\ln CPI_t)$$

$$\begin{aligned}
& (-5.25) \quad (4.27) \quad (4.20) \quad (-3.53) \\
& + 0.3926(\Delta \text{M2}) + 0.1826(\Delta \text{CPI}) \\
& \quad (3.18) \quad (5.22)
\end{aligned}$$

$R^2=0.8484$ $S.E. = 0.05$ $ARCH = 0.5496$ (1) $JB = 0.1693$ $DW = 1.93$ $RESET = 0.3729$

$Sample\ size = 25$ $Breusch-Godfrey\ serial\ correlation\ test = 0.2633$ (2)

List of variables:

$M2 = Demand\ for\ Real\ Broad\ Money$

$CPI = Consumer\ Price\ Index$

$\Delta \text{M2} = Shift\ Dummy\ Variable.$

i) Consumer price index

The import prices index explains the consumer prices, given that most goods are imported from South Africa and it is therefore captured in this index. The deflator for GDP is a proxy for domestic output prices and reflects a measure of prices in the goods and services sectors. As expected both variables has a positive influence on the consumer price index. An attempt was made to estimate the effect of broad money pressure on the price, but the coefficient was found to be insignificant.

$$\begin{aligned}
\Delta \text{CPI} = & -0.1397\Delta \text{M2} - 1 + 0.2263\Delta \text{CPI} - 0.1092\Delta \text{CPI} - 1 + 0.5726 \\
& (-2.92) \quad (3.89) \quad (-5.41) \quad (7.37) \\
& + 0.2161\Delta \text{CPI} - 0.4615\Delta \text{CPI} - 1993 - 0.1770(\Delta \text{M2}) \\
& (2.58) \quad (-11.25) \quad (-2.64)
\end{aligned}$$

$R^2=0.8484$ $S.E. = 0.05$ $ARCH = 0.5035$ (1) $JB = 0.1693$ $DW = 1.93$ $RESET = 0.5912$

Sample size = 25 Breusch-Godfrey serial correlation test = 0.2633 (2)

List of variables:

CPI = Consumer Price Index

GDPDEFL = Gross Domestic Product Deflator

MPI = Import Price Index

DUM1993 = Dummy Variable to capture the outliers.